NewTek

3Play™ 4800 440 Mini

USER GUIDE

Revised – July 14, 2015

Trademarks: NewTek, TriCaster, TriCaster XD, TriCaster 8000, TriCaster TCXD8000, TCXD8000, TriCaster 860, TriCaster TCXD860, TCXD860, TriCaster 460, TriCaster TCXD460, TCXD460, TriCaster 410, TriCaster TCXD410, TCXD410, TriCaster Mini, TriCaster 40, TriCaster TCXD40, TCXD40, TriCaster 855, TriCaster TCXD855, TCXD855, TriCaster 455, TriCaster TCXD455, TCXD455, TriCaster EXTREME, TriCaster 850 EXTREME, TriCaster TCXD850 EXTREME, TCXD850 EXTREME, TriCaster 450 EXTREME, TriCaster TCXD450 EXTREME, TCXD450 EXTREME, TriCaster 850, TriCaster TCXD850, TCXD850, TriCaster 450, TriCaster TCXD450, TCXD450, TriCaster 300, TriCaster TCXD300, TCXD300, TriCaster PRO, TriCaster STUDIO, TriCaster BROADCAST, TriCaster DUO, 3PLAY, 3Play, 3Play 4800, 3PXD4800, 3Play 440, 3PXD440, 3Play Mini, 3Play 820, 3PXD820, 3Play 425, 3PXD425 3Play 330, 3PXD330, TalkShow, TalkShow VS100, ProTek, ProTek Care, ProTek Elite, iVGA, SpeedEDIT, IsoCorder, LiveText, DataLink, LiveSet, TriCaster Virtual Set Editor, TriCaster VSE, LiveMatte, TimeWarp, VT, VT[3], VT[4], V[T5], Video Toaster, Toaster, Inspire 3D, 3D Arsenal, Aura, LightWave, LightWave 3D and LightWave CORE are trademarks, service marks, and registered trademarks of NewTek. All other brand names, product names, or trademarks belong to their respective holders.

3Play™

TABLE OF CONTENTS

Table of Contents ..... **i**

PART I (Getting Started) **1**

1 About This Manual **3**

2 Introduction **5**

2.1 Overview *5*

2.2 Recording, Marking and Events *6*

2.2.1 What is an Event? 6

2.3 NewTek 3Play Control Surface *7*

2.4 Startup Screen *8*

2.5 Replay Desktop *9*

2.6 Features *11*

2.6.1 Physical 11

2.6.2 Multi-Tier Failsafe 11

2.6.3 Input, Output & Capture 12

2.6.4 Monitoring 13

2.6.5 Video Processing 14

2.6.6 Recording 14

2.6.7 Bookmarks 15

2.6.8 The CLIP LIST 15

2.6.9 The PLAY LIST 17

2.6.10 Program Transitions 17

2.6.11 Text, Tags and More 18

2.6.12 Publish 19

2.6.13 Macros 19

3 Setting Up **21**

3.1 Command and Control *21*

3.2 Activating & Authorizing Windows™ 22

3.3 Registration 23

3.3.1 Online Registration 24

3.3.2 Registering by Telephone 24

3.4 Input Connections 25

3.4.1 Connect A/V Sources 25

3.4.2 Genlock Connection (3Play 4800 and 440) 27

3.4.3 Timecode Connection (3Play 4800 and 440) 28

3.5 Output Connections 28

3.5.1 A/V Output 28

3.5.2 HD and SD 29

3.5.3 Connecting Devices 29

3.5.4 Supplemental Video Outputs 30

3.6 Starting a Session 31

3.6.1 The Home Page 32

3.6.2 The Session Page 34

3.6.3 The Replay Desktop 34

3.7 Configure Video Outputs 35

3.7.1 SD Analog Configuration 35

3.7.2 Display Ports 36

3.7.3 Aux (3Play 4800) 36

3.7.4 Multiview 36

3.8 Configure Genlock 37

3.9 Configure Video Input 37

3.10 Configure Audio 39

3.11 Networking 40

4 Live Production Walkthrough 41

4.1 Creating a Session 41

4.2 The Replay Desktop 43

4.3 Channel and Source Delegates 44

4.4 Record *44*

4.5 Marking Events *45*

4.5.1 Two –Button Marking 45

4.5.2 One–Button Marking 47

4.6 LIST Navigation *47*

4.7 Memos and Tagging *49*

4.7.1 Tagging Clips 51

4.8 SEARCH and GO TO *53*

4.9 Trimming Events *55*

4.10 Managing Events *55*

4.11 Preparing a PLAY LIST *56*

4.11.1 Adding Clips 56

4.11.2 Editing and Playback 56

4.11.3 Speed Control 57

4.12 Rendering a PLAY LIST *57*

PART II (Reference) **59**

5 The Startup Screen **61**

5.1 Introduction to Sessions *62*

5.2 The Home Page *63*

5.2.1 New (Session) 64

5.2.2 Open (Session) 67

5.2.3 Shutdown 69

5.2.4 Utilities 69

5.2.5 Help 72

5.2.6 Add-Ons 72

5.3 The Session Page *72*

5.3.1 File Management 73

6 The Replay Desktop **79**

6.1 Overview *79*

6.2 A Few Hints *81*

6.3 Customizing the Replay Desktop *82*

6.3.1 Rename 82

6.3.2 Dual Displays and Monitoring 82

6.4 Dashboard Tools *83*

6.4.1 Status Messages 83

6.4.2 Menus (File, Options, Macros, and Workspaces) 84

6.5 Grab & Record *87*

7 I/O Configuration 89

7.1 Output Configuration *89*

7.1.1 Channel A and B 89

7.1.2 Aux Channel (3Play 4800) 92

7.1.3 Genlock & Failsafe (4800 and 440) 92

7.1.4 Multiview 96

7.2 Input Configuration *96*

7.2.1 Input Settings 96

7.2.2 Color Balance 101

7.3 Router Configuration *104*

7.4 Timecode Configuration *105*

7.4.1 Production Time Display 105

7.4.2 Time 106

8 The Control Surface 109

8.1 Dual Channel Replay *109*

8.1.1 Channel Delegates 110

8.2 Transitions (TAKE | AUTO) *111*

8.3 Source Delegates *112*

8.3.1 CLIP LIST 113

8.3.2 PLAY LIST 113

8.3.3 LIVE 113
8.4 Independent States 114
8.4.1 LINK 114
8.5 RECORD 115
8.6 Transport 115
8.6.1 Previous 115
8.6.2 Stop 116
8.6.3 Play 116
8.6.4 Next 116
8.6.5 FAST JOG 117
8.6.6 Jog Wheel 117
8.7 Play Speed (T-Bar Section) 117
8.7.1 Illumination 118
8.8 List Selection tools 118
8.9 SHIFT 118
8.10 SET | IN/OUT 119
8.10.1 SET | IN 119
8.10.2 SET | OUT 119
8.11 ANGLE 120
8.12 BOOK MARK 121
8.13 UTILITY Buttons 121
8.13.1 CUT/COPY and PASTE 122
8.13.2 PUBLISH 122
8.13.3 Add to PLAY LIST 122
8.14 TAG, GO TO and SEARCH 122
8.15 The Number Pad 123
8.15.1 ESC & ENTER 124
9 Monitoring 125
9.1 Overlay Options 125

9.2 Input Monitors 126
9.2.1 Titlebar Features 126
9.3 Channel Monitors (A, B) 127
9.3.1 Channel Info 128
10 Recording and Storage 131
10.1 Record Configuration 131
10.2 Storage Volumes 132
10.3 Recording and the Desktop 132
10.3.1 Record On/Off 133
10.4 Grab 134
11 The CLIP LIST 137
11.1 Titlebar Tools 137
11.1.1 Tabs 137
11.1.2 Tab Menu 138
11.1.3 Event Menu 138
11.1.4 Search Results 139
11.1.5 Add Media 139
11.2 Media Asset Management systems 143
11.3 CLIP LIST Table Features 144
11.3.1 Event ID 144
11.3.2 In/Out Points, Duration (and Trimming) 145
11.3.3 Memo Fields 146
11.3.4 Managing Events 147
11.4 Playing Clips 147
11.5 Selection, Channels, & Display 147
11.5.1 Play Indicator 148
11.6 Add to PLAY LIST 148
12 The PLAY LIST 149

12.1 Titlebar Tools 149
12.1.1 Tabs 149
12.1.2 Tab Menu 150
12.1.3 Add Media & Export to Clip List 150
12.1.4 Music Tools 150
12.2 The PLAY LIST Table 152
12.3 PLAY LIST Preparation 153
12.3.1 Clip Selection 153
12.3.2 Changing a Clip 154
12.3.3 Memo 154
12.3.4 Audio 1, 2 – 3, 4 154
12.3.5 In and Out Points (Trimming Clips) 155
12.3.6 Speed 155
12.3.7 Transition 156
12.4 Clip Context Menu 157
12.5 Playback 157
12.6 PLAY LIST EDLs 158
13 TAGS, SEARCH, & More 159
13.1 Overview 159
13.1.1 Tagging Workflow 160
13.2 The TAGS Button 160
13.3 The TAGS Pane 161
13.3.1 Titlebar Tools 161
13.3.2 A Tagging Example 163
13.3.3 SKIP 165
13.3.4 Input Hinting 165
13.4 SEARCH 166
13.4.1 Dataview Entries 166
13.4.2 Finding Matches 167
13.4.3 GO TO 169
13.4.4 Search Results Tab 170

13.5 Import Tags *171*
13.5.1 CSV Example 172

14 Transitions 173

14.1 PLAY LIST Transitions *173*

14.2 Program-Preview Transitions *174*
14.2.1 'Program Out' 174
14.2.2 'Preview Out' 174
14.2.3 AUTO Workflow 174

14.3 Transition Effects *175*
14.3.1 Effect Settings 177

15 DSKs (Overlays) 179

15.1 Overview *179*
15.1.1 Overlay output A or B 180
15.1.2 Overlay graphics and logos 180
15.1.3 Officiating and overlays 180

15.2 Source Options *181*
15.2.1 Cameras 182
15.2.2 Clip List Preview(3Play 4800 and 440) 182
15.2.3 Buffers 182
15.2.4 Network Input 184

15.3 Configuration *187*
15.3.1 Position 187
15.3.2 Edges 188

16 Publish 189

16.1 Overview *189*

16.2 Account Configuration *190*
16.2.1 Social Media Sites 190
16.2.2 File Copy and FTP 191
16.2.3 Compression 191
16.2.4 Watermarking 191

16.3 The Publish Queue *192*
16.3.1 Set Publish Destinations 192
16.3.2 Publishing Clips and Stills 193
16.3.3 Share Publish Queue 194

17 Macros and Automation 197

17.1 System Macros *198*

17.2 Session Macros *199*

17.3 Recording Macros *199*
17.3.1 Macro Playback Speed 199
17.3.2 Managing Macros 200

17.4 Shortcuts and Triggers *200*
17.4.1 Conflicted Shortcuts 201

17.5 MIDI Controllers *203*

17.6 AirSend™ Control *204*
17.6.1 Example – Controlling 3Play 204
17.6.2 Default AirSend Commands 205

17.7 AMP Control *208*
17.7.1 Configuring AMP 208
17.7.2 AMP Shortcuts 208

17.8 GPI Controllers *209*
17.8.1 Configuration 209
17.8.2 Listening for GPI Triggers 210
17.8.3 Sending GPI Commands 210

17.9 Editing Macros *211*

PART III (Appendices) 213

Appendix A 3Play Mini Virtual Control Surface 215

A.1 Accessing the Virtual Control Surface *215*

A.2 Unique Virtual Control Surface Functions *216*

A.3 The Resources Page 217

Appendix B How Do I … ? 219

B.1 Connections 221
B.1.1 Connect cameras? 221
B.1.2 Color correct mismatched cameras? 221
B.1.3 Connect monitors? 222
B.1.4 Improve the Quality of Multiview Output? 223
B.1.5 Connect the Genlock Reference Signal? 223
B.1.6 Connect the 3Play Control Surface? 224
B.1.7 Insert/Remove a Drive From a Removable Drive Bay 224
B.1.8 Connect An External Hard Drive? 226
B.1.9 Eject A Hard Drive? 226
B.1.10 Connect to a Network? 226
B.1.11 Enable Termination for Video Inputs? 226

B.2 Sessions 226
B.2.1 Delete a Session (and its Content)? 227
B.2.2 Rename a Session 227
B.2.3 Manage Selected Content inside a Session? 227

B.3 Events and Recording 227
B.3.1 Start recording? 227
B.3.2 End recording? 228
B.3.3 Mark an Event? 228
B.3.4 Play a Clip? 229
B.3.5 Prepare a highlight reel? 229
B.3.6 Select a different Play List clip for the same time period? 229

B.4 Files 230
B.4.1 Manage Files? 230
B.4.2 Import Media Files? 230
B.4.3 Prepare clips for the PLAY LIST Using Apple® Final Cut Pro? 230
B.4.4 Add an External File Location to the Media Browser? 231
B.4.5 Remove a Location From the File Browser? 231
B.4.6 Export files to an External Drive? 232
B.4.7 Import/Export Files Larger Than 4 Gigabytes? 232

B.4.8 Avoid the error "… copy this file without its properties?" 232

B.5 Software, Maintenance and Updates *232*

B.5.1 Improve Performance? 232

B.5.2 Resolve Serious Instability or Dropped frames? 233

B.5.3 Update NewTek 3Play software? 233

B.5.4 Install Virus Protection? 233

B.5.5 Install My Favorite Software (or Codec)? 234

B.5.6 Restore the System to Original 'As-Shipped' Condition? 234

B.6 Registration And Tech Support *236*

B.6.1 Register the NewTek 3Play system? 236

B.6.2 Contact Technical Support? 236

B.6.3 Find Hardware/Firmware Revision Numbers? 237

B.7 Miscellaneous *237*

B.7.1 Set up remote desktop control of 3Play? 237

B.7.2 Deal With Clips or images That Seem Blurry? 237

B.7.3 Access Windows™? 237

B.7.4 Return to the Startup Screen from the Windows™ Desktop 237

B.8 More Questions and Answers *238*

B.8.1 Why is my power supply beeping? 238

B.8.2 Why are my clip duration and Countdown times different? 238

Appendix C Keystroke Shortcuts 239

C.1 Tables and Navigation *239*

C.2 Edit Lists/Text *239*

C.3 Marking *239*

C.4 Searching *240*

C.5 Control *240*

Appendix D Reliability Testing 241

Index 243

Credits **247**

PART I (GETTING STARTED)

Introducing NewTek 3Play™ – connections and registration, a top-level overview of primary features, and a hands-on tour to get you started.

1 ABOUT THIS MANUAL

Hate reading manuals? If so, you are part of the majority. Estimates are that between 60 and 97% of the human race concur. Most prefer to jump right in, maybe asking a friend for occasional help – and who can blame them?

This manual attempts to tell you what you need to know in a friendly, concise way, while also providing a deeper reference section you can turn to when you really need specifics.

Even if you hate reading, please take a moment to peruse at least *this* section, which explains the manual's organization. You may find you can escape with a minimum of reading. (Or, if you are a devout reader, you can be the *hero* others turn to for expert advice.)

Part I – Getting Started: introduction to NewTek 3Play 4800, 440 and Mini – connecting devices (cameras, monitors, etc.) and registration, ending up with the Live Production Walkthrough – a brisk jog through fundamentals, about 16 pages (if you're a quick study, this may provide all you need).

Part II – Reference: chapters in this section cover every arcane detail related to using 3Play (for those who need it, and those who just like to know everything).

Part III – Appendices: leads off with a handy section titled "How do I …?", a helpful question and answer section with its own brief index. When you have a specific need, you may well find a quick answer here, along with cross references to more detailed information when appropriate. Appendix B lists shortcut keys. Part III is also home to a comprehensive keyword index.

2 INTRODUCTION

Thank you for purchasing NewTek 3Play™. This system is a member of the NewTek family of live video production systems and software, and enjoys a proud heritage. A bona fide video pioneer, NewTek is justifiably proud of its record of innovation, ongoing commitment to excellence and superb product support.

This chapter provides a quick tour of the major components of your NewTek 3Play system.

2.1 OVERVIEW

NewTek 3Play™ is a multi-channel high definition video device supporting simultaneous recording, display and smooth slow motion replay of as many as eight audio and video sources .

3Play's outputs include professional quality connections capable of distributing two fully independent video channels (designated *Channels A* and *B*) to external video systems, such as live broadcast switching equipment.

Alternatively, these two primary outputs support a video switcher style program-preview workflow, complete with transitions, and even overlays. Too, 3Play supports selectively publishing data to internal and external file storage, ftp and social media platforms on the fly.

Realtime A/V output at a given moment may consist of any combination of the following:

I. *Live* video – direct pass-through of an input source
II. *Delayed* video – output running somewhat behind live input
III. *CLIP LIST* – playback of a timed segments of captured (or imported) media
IV. *PLAY LIST* – playback of a prepared playlist that may include clips or other imported media and transitions.

Tip: It's important to realize that sending Live, Delayed, CLIP LIST or Play List sources to output does not interrupt ongoing capture of live sources.

Delayed, *CLIP LIST* and *PLAY LIST* video streams can also be played back at variable speeds. The standard (NTSC) 3PLAY provides output in popular 1080, 720p, and conventional SD video formats. Multi-standard 3Play™ systems support the equivalent formats for NTSC, NTSC-J and PAL video broadcast standards.

2.2 RECORDING, MARKING AND EVENTS

Recording is intrinsic to NewTek 3Play, and is configured for specific a/v sources when creating your live production session (see Section 5.1, Introduction to Sessions). Pressing REC on the Control Surface (or clicking the *Record* button in the *titlebar* on the *Replay Desktop*) activates continuous capture of all configured sources.

Typically, each recorded stream will comprise the output from a different camera angle. (Up to the limit of sources supported for the session type, Standard or Redundant, input sources not configured for recording can be viewed as reference and output live – but are not available for replay purposes.)

Note: When timecode for a session being recorded reaches 24:00:00.00, a new recording is automatically started. A few frames are lost in this process. Use the 'Subtract 12 hours; feature in Timecode Configuration to avoid problems when necessary – see Section 7.3.

2.2.1 WHAT IS AN EVENT?

The operator uses the supplied NewTek 3Play external *Control Surface* to mark *events*. Each event entry appears in the *CLIP LIST* module on the *Replay Desktop* as a single row of clips identified in the left-most column of the row by an *Event ID* number and followed by related data.

Events can be thought of as timed segments of the recorded video, created by setting *In* and *Out points* as a live production progresses. Newly-marked *events* are successively added to the *CLIP LIST* for convenient recall. The (*In* and *Out*) timecode values for an event are effectively digital pointers that identify the first and last frames of a specific portion of the recorded footage.

Thus an *event* is not merely a *clip*. Think of it as a synchronized time 'slice' across *all* recorded video streams (or 'angles', if you like). You can recall and display any *clip* from an *event* instantly. This involves sending the stream from a specific camera to one of the system outputs.

Tip: Two different clips from one or more events can be displayed simultaneously using the two outputs.

3Play normally captures a complete, uninterrupted record of your production. The events listed in the *CLIP LIST* simply isolate segments in this vast volume of stored information. Add and remove *events* freely with no fear of losing recorded material. You can even add, remove or reorganize *events* during recording, or long after your session ends.

2.3 NEWTEK 3PLAY CONTROL SURFACE

A dedicated NewTek 3Play external Control Surface (Figure 1) provides primary operational control – see Chapter 8. (Text editing and other supplementary control is supported using the keyboard.)

Figure 1

Note: If the Control Surface is not available for any reason, its core functions can be accessed using keyboard shortcuts.

2.4 STARTUP SCREEN

The *Startup Screen* appears when you power up your NewTek 3Play. This area offers initial configuration options along with system management tools.

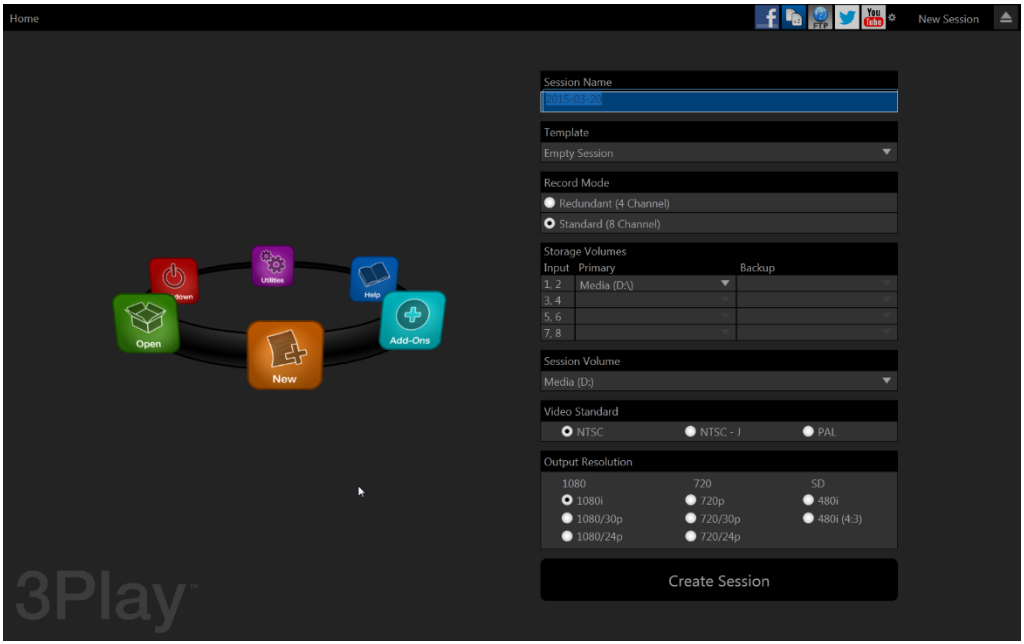


Figure 2 (3Play 4800 shown)

The *Home page* of the *Startup Screen* allows you to define and open *sessions*, essentially custom presets for individual productions or other purposes. If you re-open a *session* on some later occasion, all of its assets and settings are remembered.

After creating a *session* (or opening an existing one), you are taken to the *Sessions page*. Here you can launch the *Replay Desktop*, or perhaps choose to *Import Media* for your *session*, or *Export Media* from an earlier one.

2.5 REPLAY DESKTOP

3Play's live production features are all available from its unique *Replay Desktop*. The various features, controls and modules on the *Replay Desktop* are essentially laid out in horizontal bands, as seen in Figure 3.

Figure 3

- The uppermost area is the *Dashboard*, which displays important session information, and provides quick access to key features, including *Record*, *Grab*, and various menus.

- Just below the *titlebar* are desktop monitors showing 3Play's video input and output streams. This region of the *Replay Desktop* also provides some very special features just below the primary output monitors as follows:

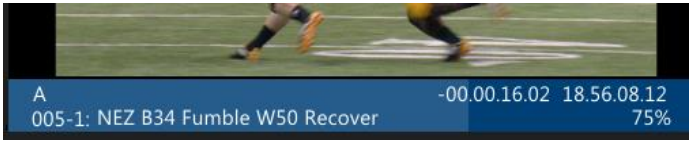


Figure 4

- A *Channel Info* pane immediately beneath each output monitor lists important data about the video source displayed on that channel (Figure 4).

Figure 5

- Some very important features occupy prime visual real estate in small panes just beneath the *Channel Info* displays.

  A large, high-visibility field at left in this zone is referred to as the FastClip *toolbar* (Figure 5).

  - Selecting a data field in the *CLIP LIST* or *PLAY LIST* snaps its content (whether a *Memo* entry, *Event ID*, or time value) into the *dataview* window in this pane. This value can then be modified by keyboard or *Control Surface* operations.

  - *Dataview* content can also be used as criteria for the nearby *Go To* and *Search* features (and corresponding *Control Surface* buttons).

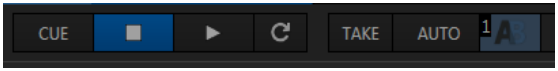


Figure 6

- Also beneath the monitors are and *Transport* (*Play*, *Stop*, etc.) and *Transition* controls (Figure 6).

- The spreadsheet-like *CLIP LIST* is centrally located (Figure 3). Its multiple tabs (including the *Search* results tab) and columns help you identify, locate, manage and replay the huge amount of audio-visual data 3Play captures.

- Just below is the *PLAY LIST* (Figure 3). Here you can create and control more complex sequences such as highlight reels. These can include imported graphic, animation and video elements, as well as music and full color *Animation Store* transitions.

Hint: The optional Single Pane mode combines the CLIP LIST and PLAY LIST tabs in one pane capable of displaying many more events at once (see Section 6.4.2).

- The *Tags* pane at the very bottom of the *Replay Desktop* (Figure 3) makes entering values and comments splendidly quick and convenient.

2.6 FEATURES

Here's a brief overview of just *some* of 3Play's key features:

2.6.1 PHYSICAL

- Rugged rack-mount case ensures robust and reliable performance in fixed or mobile installations. (3Play 4800 and 440 only)
- 3Play 4800 (only) also provides redundant power supplies.
- Massive storage capacity – e.g., a 2TB hot-swappable drive holds approximately 50 hours of 1080i, or 155 hours of SD video. (3Play Mini has two internal volumes for capture. 1x 830GB, 1X930GB.)

2.6.2 MULTI-TIER FAILSAFE

3Play's 'Always on Air' features provide multi-tiered redundant failsafe mechanisms in both hardware and software. To name just a few:

- Multiple software failsafe systems continually monitor and safeguard the live performance. Any recoverable software error conditions are quickly and unobtrusively dealt with.

- When enabled, video pass-through (see Section 7.1.2) ensures that as long there is AC power, audio and video from the last input are routed to *Output 1* in a case of catastrophic software condition.

- Comprehensive integrated system restore feature. Operators can quickly and easily restore to factory defaults, or create a custom restore image on another drive and either restore from that drive or use the backup drive to boot from if a complete hard drive failure ever occurs.

2.6.3 INPUT, OUTPUT & CAPTURE

- All audio and video, monitoring and network connectors are easily accessible from the rear for convenient installation in industry standard 19" rack-mount configurations. (Note, some 3Play Mini connections are front mounted).
- Most audio and video connectors are industry standard (XLR or BNC as appropriate), ensuring broad compatibility and secure, locked connections. (Mini connectors vary).
- Supply external audio via analog, AES/EBU (AES3) or SDI Embedded audio (Mini audio options are HDMI and analog ¼" jacks).
- Balanced XLR audio connectors where supplied.
- Multiple simultaneous SDI and analog output connections (except Mini).
- 3Play 440 – record up to four live video sources to internal, removable or external media.
- 3Play 4800
    - Record from four video sources to removable redundant media, freely choosing between SDI and analog HD (or SD) cameras.
    - Or record up to eight sources without redundant recording.
- Capture and play back 16:9 and 4:3 formats in both HD and SD sessions.
- Output HD sessions as SD (4:3 or 16:9) and HD simultaneously from HD sessions.
- Play list module supports inserting pre-recorded video, sound and imagery into your live productions.
- Send both primary outputs (A and B) from 3Play to a NewTek TriCaster across your network, leaving the video outputs free for other purposes.
- Use one output for program output, the other as preview, and switch sources with colorful *Animation Store* transitions.
- Display highlight reels with colorful transitions, bumpers and audio bed using either output channel.
- Supplemental *Aux* (Auxiliary) Video output to a projection system or secondary monitor at session resolutions up to 1920x1080.

2.6.4 MONITORING

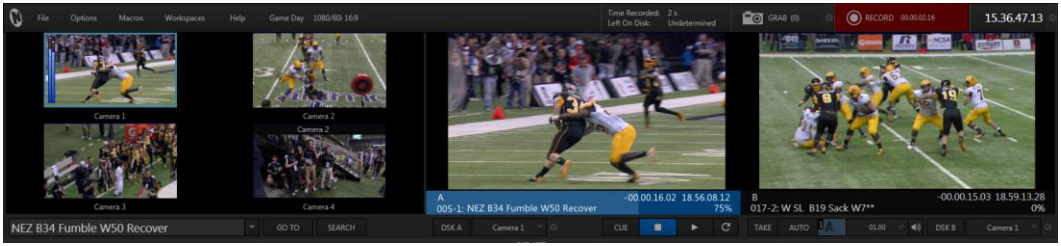


Figure 7

By default, the *Replay Desktop* includes two large output monitors at right, labeled *A* and *B*. The area at left shows *input* monitors as appropriate for the number of sources you have configured for recording, For example, in *Redundant (4 Channel)* mode operation, four input monitor viewports are displayed.

Tip: The display configuration for 3Play's secondary Multiview output is governed by controls found in the Output Configuration panel.

CHANNEL INFO AND CONTROLS

The region of the *Replay Desktop* just below the primary output monitors also provides some very special features. First, data pertinent to the current video source for each output is displayed in a *Channel Info* area immediately below (Figure 8) the corresponding viewport.

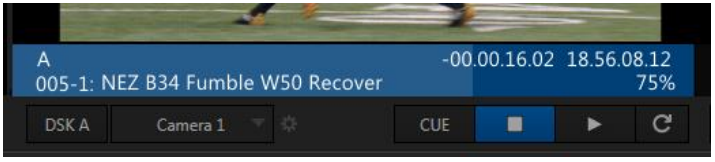


Figure 8

Tip: Normally, the selected Channel Delegate button on the Control Surface determines which channel – A or B – CS operations are currently governing. Note that you can also delegate a channel using the mouse, by clicking the Channel Info area beneath either the A or B monitor.

A control group located beneath the output monitors hosts *Transition*, *Transport* (*Play*, *Stop*, etc.) and *DSK* (Downstream Key, or 'overlay') controls.

FASTCLIP TOOLS

Figure 9

You'll find additional and *very* important features occupying prime visual real estate just beneath the monitor area (Figure 5). A large, high-visibility window at left in this zone is referred to as the *FastClip dataview.*

Selecting a data field in the *CLIP LIST* or *PLAY LIST* snaps its content (whether a *Memo* entry, *Event ID*, or time value) into the *dataview*. This value can then be modified by keyboard or *Control Surface* operations. Keyboard and *Control Surface* entries can also be used as criteria for the nearby *Go To* and *Search* features (and corresponding *Control Surface* buttons).

MULTIVIEW

3Play's *Multiview* output commonly serves supplemental control room monitoring needs. External Multiview Workspaces offer many alternatives, including numerous multi-bridge layouts, overlays and Event Clocks. The *Multiview* layout output is configured using the *Workspaces* menu in the *Dashboard* at the top of the *Desktop* (see Section 6.4.2 for a more thorough discussion).

2.6.5 VIDEO PROCESSING

Input *Proc Amps* allow you to adjust the video signal to harmonize color balance for all sources.

- Separate controls are provided for *Brightness, Contrast, Hue* and *Saturation* for each video source, along with *White Balance* and *U* and *V Offset*.

2.6.6 RECORDING

Apart from live throughput, virtually all replay output features depends on recorded data.

Figure 10

- The *Record button* is located in the *titlebar* above the output monitors.
- Valuable information about the recording and remaining space is displayed nearby.
- Recording can also be enabled from the NewTek 3Play *Control Surface*.

2.6.7 BOOKMARKS

3Play's timecode bookmark system is almost too easy to use. There are a maximum of ten bookmarks. Simply press *BOOK MARK* on the CS to set bookmarks in your footage (*REC* must be enabled). Press *SHIFT + BOOK MARK* repeatedly to jump sequentially back through the markers you've set (3Play will switch to *Delayed* playback mode).

2.6.8 THE CLIP LIST

Figure 11

Synchronized segments of the recorded data from all cameras are identified as individual *events* by setting in and out points. Each marked *event* occupies one row in the spreadsheet-like *CLIP LIST*. *Events* can be rearranged and re-trimmed in the *CLIP LIST*.

The different sources (or 'angles') available for each *event* (see Section 2.2.1) are presented as labeled columns (Figure 12).

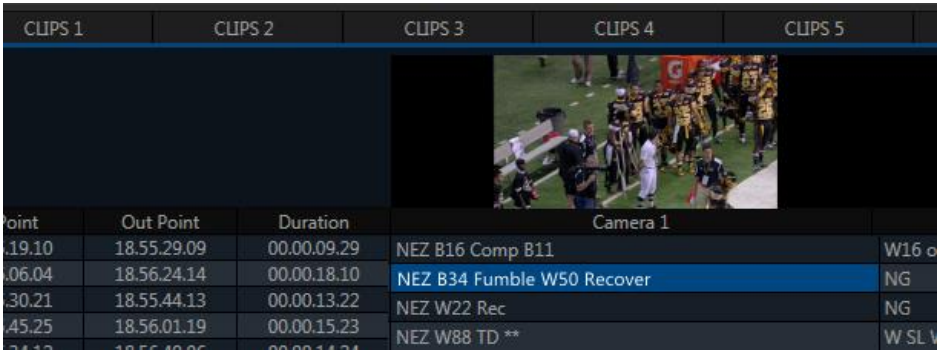


Figure 12

Small *clip monitors* above each column (Figure 13) make it easy to follow the action and select the angle offering the best view of events.

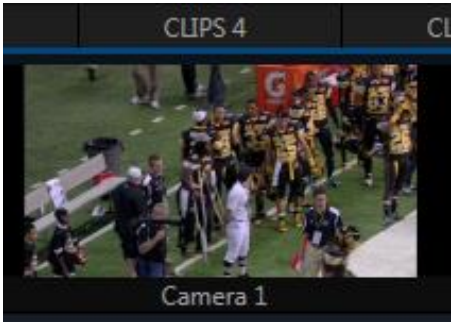


Figure 13

The 'angle' columns beneath are actually *Memo* columns, and allow you to enter comments, tags, and other metadata that, with the *Search* feature, can help you quickly locate specific views for playback, inclusion in playlists, etc.

The *CLIP LIST* offers an unlimited number of tabbed pages to help you manage your recorded content. In addition, the *CLIP LIST* supports the import of media clips as well as still images for various purposes (the PLAY LIST also supports imported files).

2.6.9 THE PLAY LIST

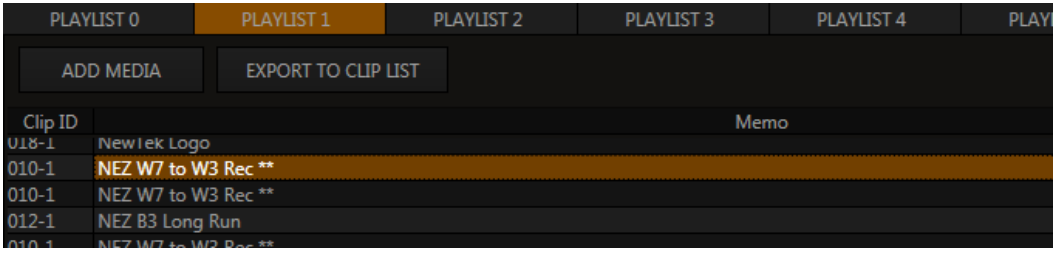


Figure 14

Individual *clips* from *events* appearing in the *CLIP LIST* can be added to the *PLAY LIST* pane below (as can other items imported using the *Add Media* button).

The *PLAY LIST* plays all entries in sequence from top to bottom, with optional transitions between clips. Like the *CLIP LIST*, the *PLAY LIST* pane offers multiple tabbed pages, supports clip re-ordering, comments, trimming, and numerous other features.

2.6.10 PROGRAM TRANSITIONS

Figure 15

We mentioned *Transitions* earlier (under Monitoring), but 3Play's powerful transition system merits a heading of its own.

Figure 16

3Play output can employ spectacular high-end transitions, including *Animation Store* effects that include full color embedded overlays, in several ways.

PLAY LIST compositions, such as highlight reels, support transitions between clips, each with adjustable timing and even accompanying transitional audio effects. Unlike many replay systems, 3Play does not tie up two different outputs to do this.

Further, 3Play even supports a 'program-preview', or 'video switcher' style workflow. The latter approach allows you use 3Play's powerful effects system to transition between the sources displayed on *Outputs A* and *B* (see Chapter 14, Transitions).

In this (program-preview) scenario, *Channel B* stands in for the traditional program output, while *Channel A* serves as preview. This enables some unique production possibilities – such as an *Auto* between two *PLAY LIST* compositions during playback – something often only possible when system architecture includes a downstream switcher.

2.6.11 TEXT, TAGS AND MORE

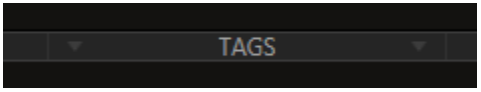


Figure 17

A *Tags* bar is situated at the bottom of the *Replay Desktop* (Figure 17). Dragging this divider bar upward reveals tabbed panes containing rows of numbered cells. Text 'tags' (e.g., player names, notable play types, adjectives, etc.) entered into these cells can be quickly inserted into *Memo* fields for selected clips, and can even be used as *Search* criteria.

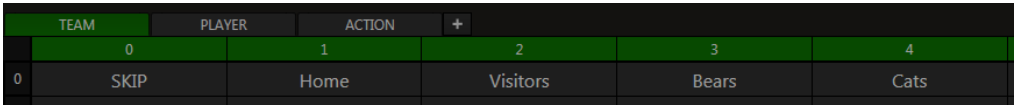


Figure 18

The *Tags* module inserts its output into the easily legible *Text Box*, discussed earlier (Figure 9), just like other textual input. (All text input is displayed in this box, whether it originates from the number pad on the *Control Surface,* or from the keyboard.)

Tip: When the TAG button on the Control Surface is lit, number pad entries are automatically translated to the corresponding tag entries. For example, in Figure 18, the Tags pane lists player names. Typing "01" on the pad sends "Jones" to the Text Box. Pressing Enter then pushes this entry into the Memo field for the selected clip(s).

2.6.12 PUBLISH

Though a relative newcomer, social media has carved an important niche for itself in the realms of video production and broadcasting. 3Play can publish both still images and trimmed, commented clips from *CLIP LIST* or *PLAY LIST* pages to popular public sites, along with traditional production storage. Media can even be published while events are still underway, while live capture continues uninterrupted.

2.6.13 MACROS

Record simple or complex combinations of operations as macros, then assign these to internal and external trigger events to be executed at will. 3Play's Macro Configuration panel provides numerous management features, such as folders, rename, clone, and hotkey and control panel assignment, as well as Import and Export (share macros with other 3Play users). Macros can be flexibly stored as part of a session or as part of the global macro configuration available in all sessions. You can also open macros in the integrated editor and tweak them to perfection.

3 SETTING UP

This chapter explains how to properly connect power, external control devices, monitors and audio visual sources to your NewTek 3Play™ system.

It also reviews registration for warranty purposes and technical support. After completing this short section, you'll be all set to continue into the Walkthrough chapter that follows it.

To begin, let's review 'what came in the box':

- 3Play™ and *Control Surface
  *(3Play Mini's control surface is 'virtual'; it can be accessed from a web browser on any suitable networked device, such as an iPad or laptop.)
- Storage Media
  - 3Play 4800 – Package of four 2TB hard drives
  - 3Play 440 – Package of two 3TB hard drives
  - 3Play Mini – internal drives (830GB and 930GB volumes)
- A/C power cable(s) and 6' USB cable (external PSU with cable for 3Play Mini)
- NewTek mouse and keyboard
- 3Play Quick Start Guide
- Registration reminder card
- BNC removal tool (not supplied with 3Play Mini)
- Keys to front panel of rack mount case (2)
- Attachable rubber feet for desktop use (4)
- NewTek TriCaster™ brochure and 3Play Welcome letter

3.1 COMMAND AND CONTROL

1. Connect an external computer monitor to the *Interface* port on 3Play's backplate (use an adapter if necessary).

   Note: The user interface requires a minimum screen resolution of 1600 x 1050.

2. Connect the mouse and keyboard to USB ports on 3Play.
3. Connect the A/C power cord(s) from the three-prong connection(s) on 3Play's backplate to an external power receptacle (see *Tip* below).

4. Turn on the computer monitor.
5. Press the *Power switch* located on 3Play's faceplate.

At this point, the blue *Power LED* will illuminate, and the adjacent hard drive activity light should flicker as the device boots up. (If this does not happen, check your connections and retry).

Though not a requirement, we do strongly recommend that you connect 3Play using an uninterruptable power supply (UPS), as for any 'mission critical' system. Likewise, consider A/C "power conditioning", especially in situations where local power is unreliable or 'noisy'.

A word about UPS devices:

'Modified sine wave' UPS devices are popular due to low manufacturing costs. However, such units should generally be viewed as being of low quality and possibly inadequate to fully protect the system from abnormal power events.

For a modest added cost, you can obtain a "pure sine wave" UPS. These units can be relied on to supply very clean power, eliminating potential problems, and we highly recommend them for use in environments where reliability is absolutely critical.

Surge protection is especially important in some locales. Power conditioners can reduce wear on 3Play's power supplies and other electronics, and provide a further measure of protection from surges, spikes, lightning and high voltage.

3.2 ACTIVATING & AUTHORIZING WINDOWS™

Note: This operation may have been performed for you as part of pre-delivery preparation.

When you see the 'Welcome to Windows' screen:

1. Click *Next* at lower right.
2. Choose your time zone.
3. Accept the license agreement.
4. Enter your 25-digit key (from the sticker inside 3Play's left front door).
5. Decline automatic updates (by clicking "not right now").
6. Give 3Play a distinct computer name for networking.

You can authorize your Windows installation by network or by telephone. Assuming you have an Internet connection available, and have connected 3Play to it with an Ethernet cable, the Internet is the fastest method of activation. (See Section 3.11 for more on network connections.)

7. Click 'Obtain IP and DNS automatically'.
8. Agree to activate Windows. This activation is permanent, and you won't see these screens again. (Registration with Microsoft is optional).
9. Assign a name to the *administrator* account. You may type your name, company, or perhaps simply "3Play".
10. Click *Finish*, and the system will re-start.

After restarting and accepting NewTek's *User Agreement*, the interface will load automatically.

Tip: This might be a great time to review the matter of creating a custom backup drive. See Section B.5.6 for instructions.

3.3 REGISTRATION

On launch, 3Play will display an *End User License Agreement* dialog. If you accept this agreement, the *Registration* dialog shown in Figure 19 provides the unique *Product ID* you need to register your system.

If necessary, enter the unique *Serial Number* and *Product ID* for your system.

Note that 3Play's video output will show a watermark until the system is registered and unlocked using the *registration code.*

Tip: Serial number stickers are affixed to the system chassis. (For example, look inside the left front door of 3Play 440, and the drop-down front panel of 3Play 4800.) For a previously registered system, you can also obtain it from the registration webpage mentioned in the next section. If you cannot locate the serial number, call NewTek's Customer Support Desk (open seven days a week).

Register 3Play™
Registration is required in order to use this product. Please follow the steps outlined below.
1
Enter your 15 digit Serial Number:
(found on your registration card and also on your 3Play case)
09AX22123716984
2
Note the following Product ID:
XAX2-99XKA3J6-270711
3
If your 3Play™ is not currently connected to the internet, please visit:
http://register.newtek.com/ on another computer or at a later time.
Click here to visit register.newtek.com and get a registration code.
4
Enter your Registration Code:
Continue

Figure 19

You can register and obtain your registration code either by telephone, or online (directly from 3Play or from another system connected to the Internet) as described next.

3.3.1 ONLINE REGISTRATION

If you have connected your 3Play to the Internet, simply click the button under Step 3 in the registration dialog. This will take you to the *Registration* webpage (http://register.newtek.com) in the *Customer Care* section of NewTek's website. There you will find further directions.

Tip: More information on connecting to a network can be found in Section 3.11.

Otherwise, you can visit the registration webpage from another system that does have Internet access. In either case, after registering on the website, transfer the resulting *registration code* into the field provided at Step 4 of the dialog.

Tip: It's a very good idea to record the login name and password you choose when creating your website profile and keep them in a safe place.

We recommend that you also jot down the Registration Code, too. This could come in very handy if you ever need to restore the 3Play software to its as-shipped state when you don't have convenient access to the Internet.

3.3.2 REGISTERING BY TELEPHONE

NewTek's Customer Support desk can also handle registration requests by telephone, if that is more convenient (when opportunity permits, you should still visit the website as discussed above, in order to gain access to software updates).

Please have your *Product ID* (from the Registration dialog mentioned earlier) handy when you call. The phone numbers for Customer Service follow:

- Telephone:
  - (US) 1-800-862-7837
  - (Outside US) +1-210-370-8452
- Fax: 210-370-8001
- Email: cs@newtek.com

3.4 INPUT CONNECTIONS

3.4.1 CONNECT A/V SOURCES

External audio and video sources are connected to the appropriate inputs on 3Play's backplate, or, in the case of 3Play Mini, the front.

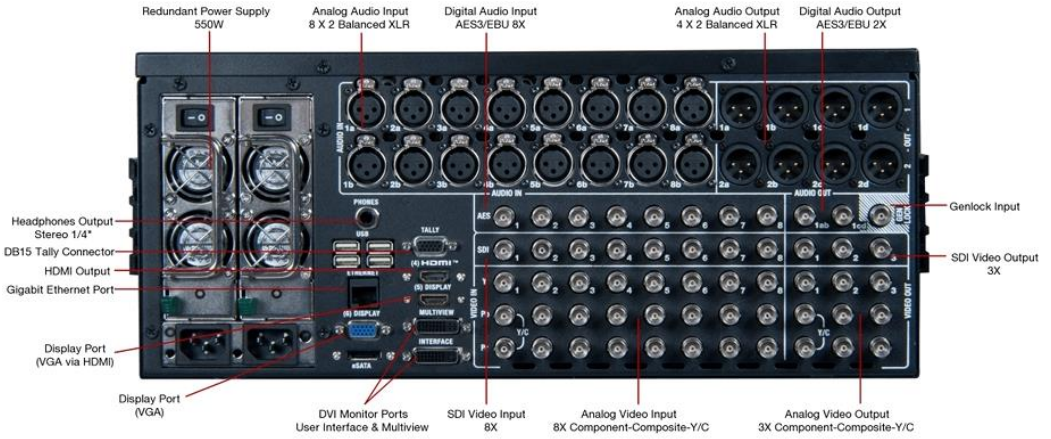

Redundant Power Supply 550W
Analog Audio Input 8 X 2 Balanced XLR
Digital Audio Input AES3/EBU 8X
Analog Audio Output 4 X 2 Balanced XLR
Digital Audio Output AES3/EBU 2X
Headphones Output Stereo 1/4"
DB15 Tally Connector
HDMI Output
Gigabit Ethernet Port
Display Port (VGA via HDMI)
Display Port (VGA)
Genlock Input
SDI Video Output 3X
DVI Monitor Ports User Interface & Multiview
SDI Video Input 8X
Analog Video Input 8X Component-Composite-Y/C
Analog Video Output 3X Component-Composite-Y/C

FIGURE 20 – 3PLAY 4800

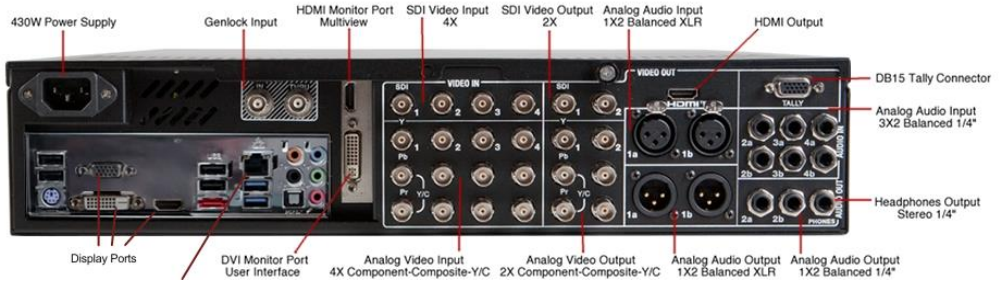
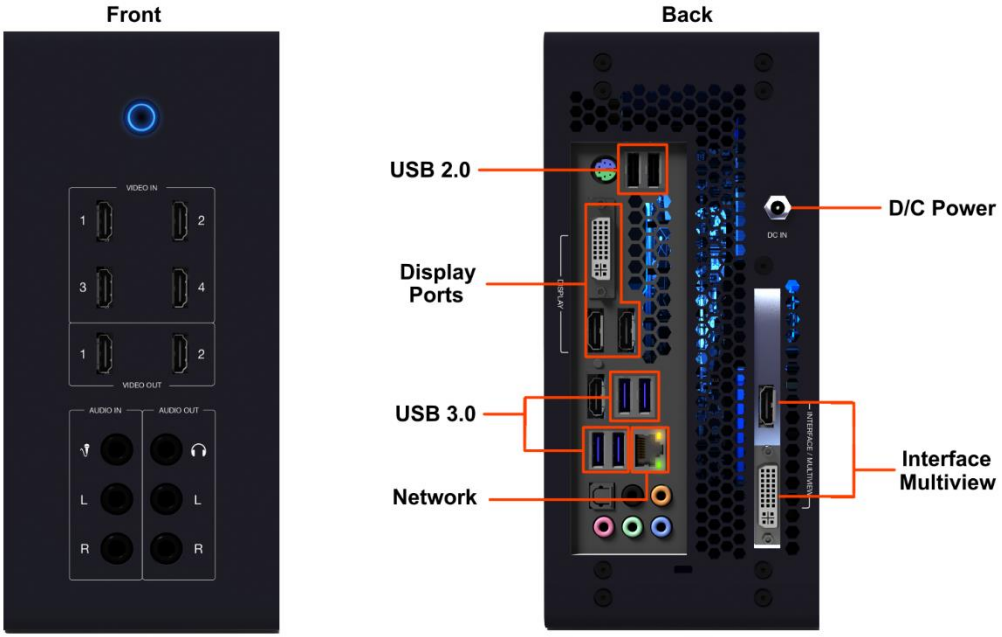

430W Power Supply
Genlock Input
HDMI Monitor Port Multiview
SDI Video Input 4X
SDI Video Output 2X
Analog Audio Input 1X2 Balanced XLR
HDMI Output
DB15 Tally Connector
Analog Audio Input 3X2 Balanced 1/4"
Headphones Output Stereo 1/4"
Display Ports
DVI Monitor Port User Interface
Analog Video Input 4X Component-Composite-Y/C
Analog Video Output 2X Component-Composite-Y/C
Analog Audio Output 1X2 Balanced XLR
Analog Audio Output 1X2 Balanced 1/4"

FIGURE 21 – 3PLAY 440



1. Connect *video* sources to the appropriate connectors in the *VIDEO IN* section, whether *SDI*, *Component*, *Y/C* (S-Video), *Composite* (may require RCA to BNC adapter) or HDMI (3Play Mini).

    a. *SDI/HDMI* – Attach the SDI source connectors to BNC connectors marked SDI in the *Video In* group.

Tip: If your equipment supports SDI, this is your best quality I/O option.

b. *Component* **–** Attach the appropriate BNC connectors from your sources to all three analog BNC connectors (labeled *Y, Pb* and *Pr*) in each column in the *Video In* group.

c. *Y/C* – If your S-Video equipment and cabling has the usual 4-pin mini-DIN connectors, you will need an *S-Video to dual BNC* adapter. To connect Y/C sources, attach the *Y* (luma) connector of your source to the second analog BNC connector (labeled *Pb*). Attach the source's *C* (chroma) connector to the *bottom* connector (labeled *Pr*).

d. *Composite* **-** Attach the composite source's connector (may require an RCA to BNC adapter) to the *second* connector (labeled **Y**).

Note: The video broadcast standard (such as NTSC, NTSC-J or PAL) of all video sources connected for a given session must be the same.

2. To input *analog* audio along with the video, connect the external audio sources to the XLR or ¼" connectors in the *Audio In* group box. Two connectors, labeled "a" and "b", are provided for each input group.

   We'll discuss audio *Connection Type* options a bit later, in Section 3.10.

Digital Audio Note: To connect AES/EBU (a.k.a., AES3) audio source, use the BNC connectors in the Digital Audio (AES) section. SDI video sources with embedded audio do not need a separate audio connection.

3.4.2 GENLOCK CONNECTION (3PLAY 4800 AND 440)

The *Genlock* input on 3Play's backplate is for connection of a 'house sync' or *reference signal* (often a 'black burst' signal intended specifically for this purpose). Many studios use this method to synchronize equipment in the video chain. Genlocking is commonplace in higher-end production environments, and genlock connections are usually found on professional gear.

If your equipment allows you to do so, you should genlock 3Play *and* all cameras you configure as sources for it (see your camera manual for details). To do so, supply the reference signal from the 'house sync generator' to 3Play's *Genlock* input connector.

3.4.3 TIMECODE CONNECTION (3PLAY 4800 AND 440)

3Play supports external linear timecode (LTC). Connect the cable from your timecode generator to one of the connectors in the *Audio Input 7* group for 3Play 4800 or, for 3Play 440, either *Input 3* or one of the 3.5mm audio input jacks (line or mic level) on the back of the system. External timecode is enabled and configured in the *Replay Desktop* (see Section 7.3).

3.5 OUTPUT CONNECTIONS

Next we'll discuss the audio and video output connectors along with relevant settings. We'll start with video output, not only so you can view your results, but because some aspects are best considered before even beginning a 3Play session.

3.5.1 A/V OUTPUT

3Play provides several video and audio output connector groups, and very flexible options for display of your live and recorded video streams. Here are some of the possibilities:

- Simultaneously send two indpendent outputs to extneral devices.
- Send 3Play audio and video output to a network-connected TriCaster ™.
- Simultaneously send output to both analog and digital devices.
- Transmit another output or multi-bridge monitoring layout to a secondary monitor (or projector) via the *Multiview* port.
- Another output *option* is provided via an HDMI port. This output tracks the active 3Play *Channel Delegate* (*A* or *B*).
- Finally, two *Display* ports provide *Channel A* and *B* video to two further computer style monitors.

3.5.2 HD AND SD

As mentioned earlier, the *VIDEO OUT* section on 3Play's backplate provides vertical columns of four BNC connectors. These represent:

- *Channel A* (labeled 1 in the *VIDEO OUT* group)
- *Channel B* (labeled 2 in the *VIDEO OUT* group)
- 3Play 4800 only – *Aux* (labeled 3 in the *VIDEO OUT* group); carries the same signal as either *Channel A* or *Channel B*, depending on 3Play's current *Channel Delegate* (see Section 7.1.2).

The output connectors provide either SD or HD video output, according to the format specified for the current session, using any of several different device connection types as discussed next.

3.5.3 CONNECTING DEVICES

1. Connect downstream video devices to the appropriate output connectors in the *VIDEO OUT* section, whether *SDI*, *Component*, *Y/C* (BNC), *Composite, or HDMI (3Play Mini)*.

   Please note that Y/C (BNC) and Composite may require RCA (cinch plug) or S-video (4 pin mini-DIN) to BNC adapters, and also that both of these connection options support output at SD resolution only.

   a. *SDI* – Attach SDI connectors to the uppermost row of BNC connectors in the *VIDEO OUT* connector groups.

Tip: If your equipment supports SDI connections, this is your best quality option.

   b. *Component* – Attach your device to the second, third and fourth BNC connectors (*Y*, *Pb* and *Pr*) in the *VIDEO OUT* connector groups.

   c. *Y/C* – If your S-Video equipment and cabling has the usual 4-pin mini-DIN connectors, you will need an 'S-Video to dual BNC' adapter. Attach the *Y* (luma) connector of your device to the second analog BNC connector row (labeled *Pb*). Attach the *C* (chroma) connector to the third analog connector (labeled *Pr*).

d. *Composite* **-** Attach the device's connector to the first (top) *analog* connector.

2. Connect 3Play's audio outputs:

   a. *Analog audio* – Connect external audio devices to the connectors in the *AUDIO OUT* section.

      Note that there are two rows of connectors: Connectors numbered 1a and so-on provide *Channel A* sound, while *2a* etc., are assigned to *Channel B*. These two output sections are configured and controlled separately in the *Replay Desktop*.

      3Play 4800 only – Aux (Row 3) carries the same audio as either *Channel A* or *Channel B*, depending on 3Play's current *Channel Delegate* selection.

   b. *Digital audio* – Use the two BNC connectors identified as *1ab* and *1cd* in the *AES* section (below the analog audio outputs) section to connect downstream AES/EBU (AES3) audio devices. (A separate digital audio connection is not necessary for SDI output with embedded audio.)

Tip: The SDI and analog output connectors in any video output row can be used simultaneously. For example, for Output A, you could use the Component output connectors to supply your program to a local video monitor at the same time as you use the HD-SDI connection to supply broadcast equipment.

3.5.4 SUPPLEMENTAL VIDEO OUTPUTS

Additional dedicated video outputs make it possible to connect other devices to 3Play for a variety of purposes, including program output for IMAG (Image Magnification) installations or flexible monitoring for the convenience of the operator.

HDMI

A labeled *HDMI* connector on 3Play's backplate tracks the active 3Play *Channel Delegate* (*A* or *B*). Simply connect a suitable device to the *HDMI* connector on the backplane.

DISPLAY PORTS

3Play's rear panel provides additional ports referred to as *Display* ports (these are labeled as such on 3Play 4800's backplane). For 3Play 440, there may be a number of Display port connector types. You can use any two (and only two) of those available.

NETWORK OUTPUT

3Play's *Channel A* and *Channel B* are also directly available to a network connected TriCaster™ as *Switcher* sources. There is nothing to configure on 3Play. Provided the two units are on the same network (not different subnets), the 3Play will appear in the source selector menus for TriCaster's *Net 1* and *Net 2* inputs as "3Play(A)" and "3Play(B)," where "3Play" is the network name for the unit. Conveniently, the network outputs include embedded audio, freeing up multiple TriCaster a/v inputs for other purposes.

MULTIVIEW

The Multiview output offers a variety of optional monitoring layouts that can be selected at any time in the *Replay Desktop*.

Again, connect a suitable external monitor or device (unlike the Interface connection, the *Multiview* port is DVI-D type, hence cannot supply older analog, VGA style displays). The new device should be recognized and enabled by the system automatically.

Notes: Multiview options and layouts are found in the Workspaces menu (located in the Dashboard). For best results, configure the Multiview Output to the native resolution of the external display (monitor or projector) connected to it.

3.6 STARTING A SESSION

If 3Play is not already running, power it up now to reveal the *Startup Screen*. (If 3Play is already running, and is in the *Replay Desktop* or another area of the interface, you may need to click the small [x] button at upper-right to exit, or click the *Back* arrow at upper-left in the *Session Page* to return to the *Home Page*.)

The *Startup Screen* consists of two similar screens – the *Home page* and *Session page*. Among other things, the *Home page* is where you choose basic 3Play session settings (see Section 5.1 for a discussion of sessions).

3.6.1 THE HOME PAGE

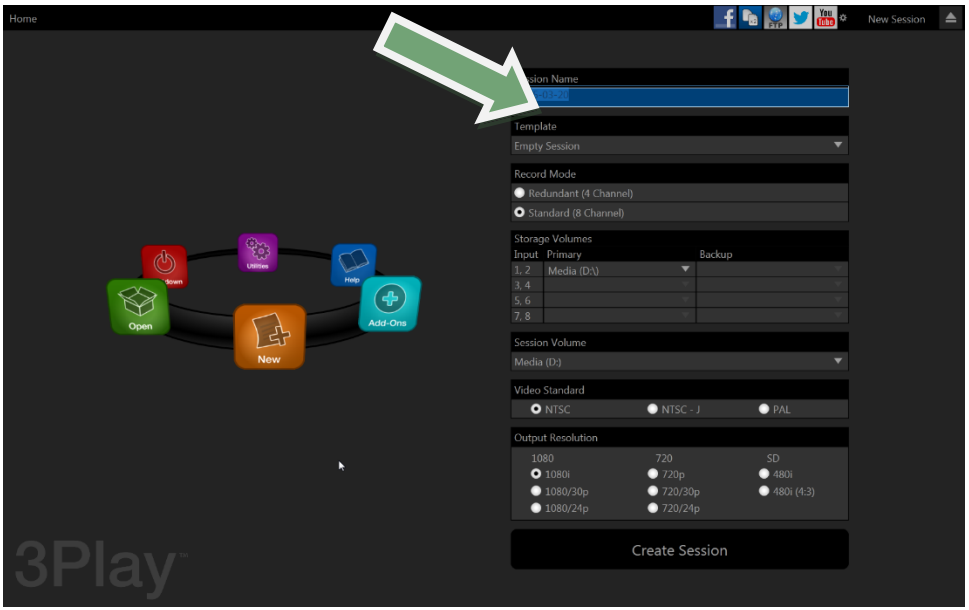


Figure 22

When no previously created sessions exist, the icon ring dominating the *Home page* defaults to *New*, inviting you to create a new session.

A link labeled *Session Name* is shown at the top of the right-hand pane when *New* is selected on the icon ring (Figure 22). Click in this field to modify the default name 3Play supplies using the keyboard. (The default name is the current date.)

RECORD MODE (3PLAY 4800)

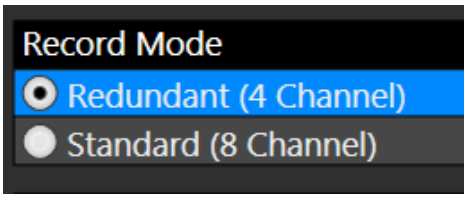


Figure 23

For 3Play 4800 *only*, continue with session creation by selecting a *Record Mode* (see Section 5.2.1 for an explanation of these options). Then assign drives to pairs of cameras you intend to recording controls in the Storage Volumes control group.

STORAGE VOLUMES AND SESSION VOLUME

Qualified storage volumes connected to 3Play or mounted in its removable drive bay are listed in the *Drives* column of the *Storage Volumes* control group. Use the drop-down menus in the *Primary* column assign to hard drives to different input pairs. For *Redundant* recording mode, continue to assign drives in the *Backup* column.

The hard drives assigned here can be thought of as comprising a 'drive set' for the session. The *Session Volume* menu allows you to designate the primary member of the session drive set (see Section 5.2.1 for more detail).

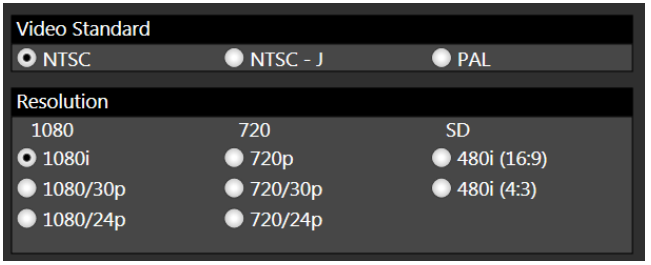


Figure 24

Tip: The Storage Volume configuration tools are designed to encourage you to record no more than two live inputs to any single volume.

VIDEO STANDARD AND RESOLUTION

For multi-standard models only, set the *Video Standard* as appropriate for your locale. For the moment, let's choose 1080i for *Output Resolution* (even if the cameras you plan to connect are SD 4:3), then click the *Create Session* link below.

Note: 3Play supports a variety of optional session configurations for live production. You can choose between several HD (High Definition) and SD (Standard Definition) formats. SD options include 4:3 and 16:9 (widescreen) image aspect formats. Multi-standard models permit you to select between video standards for your locale – NSTC, NTSC-J (Japan) or PAL.

3.6.2 THE SESSION PAGE

Clicking *Create Session* on the *Home* page will advance you to the *Session page*. Since our intention at this stage is simply to configure our connections (done in 3Play's *Replay Desktop*), go ahead and click *Start Session*. This launches *the Replay Desktop*, which is the 'live production area' where you will spend most of your time while working with 3Play.

3.6.3 THE REPLAY DESKTOP

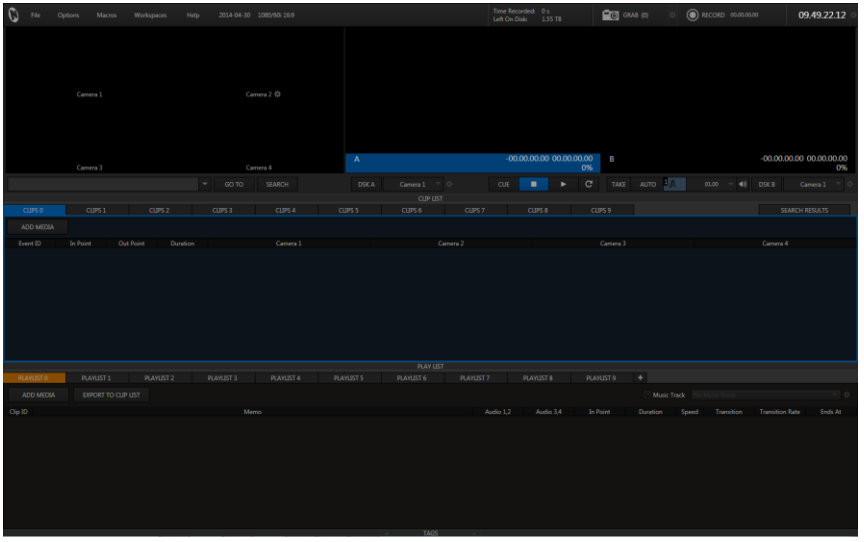


Figure 25

Initially, as you have yet to configure input devices or add content, the *Replay Desktop* will look a bit barren (Figure 25). We had a brief glimpse at the *Replay Desktop* back in section 2.5 (and we'll examine it more closely in Chapter 4, Live Production Walkthrough), but after a quick look around let's continue to configure your input and output connections.

3.7 CONFIGURE VIDEO OUTPUTS

3Play provides complete video input monitoring right on the *Replay Desktop*. This allows you to operate without even connecting downstream video monitors or devices if you wish.

Often, however, you will likely connect external devices to the *VIDEO OUT* connectors on 3Play's backplate (see Section 3.5). Connect high definition devices to either *SDI* or *Component* connections as appropriate. Other connection types are available for SD devices and sessions.

3.7.1 SD ANALOG CONFIGURATION

For standard definition monitoring, however, several types of analog connections are currently in popular use. These include *Composite*, *Y/C* (also known as S-Video) and – at the upper end of the analog quality range – *Component*. To connect an *analog* standard definition monitor for use in live production, you must specify the connection type in the *Output Configuration* panel.

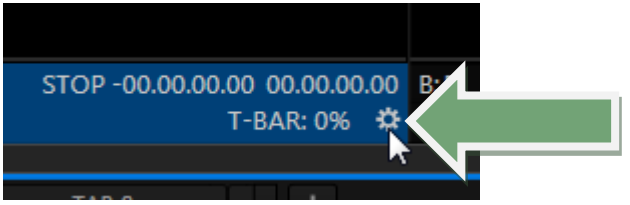


Figure 26

1. Move your mouse pointer over the *Output Configuration* button, identified by gear icons as shown in Figure 26, located at right just below each output monitor (*A* or *B*). Click here to open *Output Configuration*.

The tabs in this panel are labeled *Output A, B, Aux/Multiview,* and *Genlock.* The *Output* tabs have menus allowing you to select the *Analog Output Type* for the associated output channel, *A* or *B* (see also Sections 7.1.1 and 8.1).

For SD sessions, *Component* or *Composite + Y/C Analog Output Type* alternatives are available. For HD sessions the menu is locked, since *Component* is the only valid analog connection option.

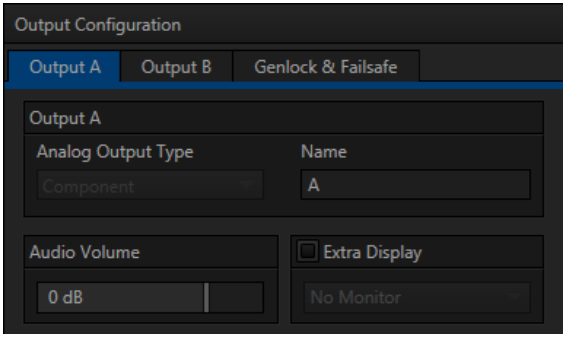


Figure 27

Selecting the *Composite + Y/C* option sends composite video output to the second BNC connector in the corresponding output row (labeled *Y*), and *Y/C* to the third and fourth connectors, labeled *Pb* and *Pr*, respectively.

3.7.2 DISPLAY PORTS

The *Display* ports described back in Section 3.5.4 are also configured in the *Output A* and *B* tabs in the *Output Configuration* dialog. The menu in the *Extra Display* control group allows you to set the resolution sent to connected monitors.

3.7.3 AUX (3PLAY 4800)

3Play 4800 has an additional tab in the *Output Configuration* panel. The *Aux* pane provides control over the third primary video output section on 3Play's rear panel, referred to as the *Aux* output. The video stream it displays is determined by the *Channel Delegate* active on the *Control Surface* at the moment. Video from the delegated channel is also sent to *Aux*.

In the *Aux* control tab you will find a menu offering the same analog connection type options discussed back in Section 3.7.1.

3.7.4 MULTIVIEW

Multiview options and layouts are found in the *Workspaces* menu (located in the *Dashboard*). For best results, configure the *Multiview Output* to the native resolution of the external display (monitor or projector) connected to it. See Section 6.4.2 for details of the Workspaces menu.

3.8 CONFIGURE GENLOCK

1. Click the *Genlock/Multiview* tab in the *Output Configuration* panel.

2. The default *Reference Type* in the *Genlock* settings group is *SD (Bi-level)*, as this is currently the most common reference signal type. However, if you supply an HD reference signal to the Genlock input, you may want to change the setting to *HD (Tri-level)*.

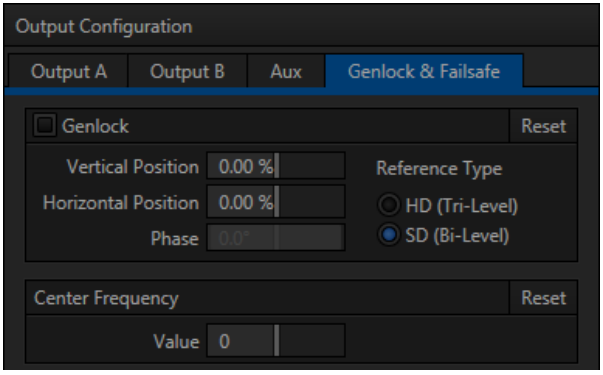


Figure 28

3. With the aid of downstream *Waveform* and *Vector Scopes*, adjust 3Play's *Horizontal* and *Vertical Position* and *Phase* settings.

Again, ideally the cameras themselves as well as 3Play should be genlocked. If cameras are not genlocked to the same reference signal as 3Play, a TBC (Time Base Correction) operation is automatically applied. Time base correction may drop or insert frames as necessary to maintain sync, a less desirable approach.

Note: For a deeper explanation of genlocking, please see Section 7.1.3.

3.9 CONFIGURE VIDEO INPUT

Let's continue by configuring the video sources you connected earlier (Section 3.4):

1. With the *Replay Desktop* open, roll your mouse into the footer below any input monitor.

2. Notice that a *Configure button* (*gear* icon) appears at right below the input monitor as you do so.

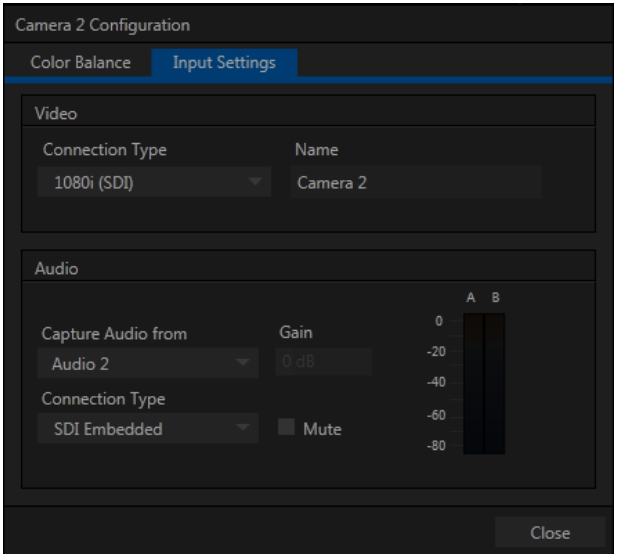


Figure 29

3. Click the *Configuration button* (gear) for *Camera 1* to open a settings panel (Figure 29).

4. Click the *Input Settings* tab.

5. Click the *Connection Type* menu to reveal a listing of various options.

6. Select the correct format, such as 720p (Component), or 1080i (SDI), etc., for the video source you plan to connect to this input.

At this point you should be able to view the (configured) sources on their respective monitors. Before closing the *Configuration* panel, let's continue to configure the related audio source.

3.10 CONFIGURE AUDIO

The *Audio* control group in the lower part of the *Configuration* panel has Input *Type* and *Gain* control features for the external audio source in the same input group as the current video input.

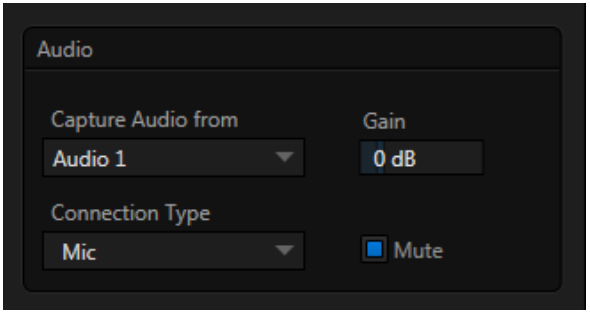


Figure 30

The upper menu permits you to choose a different audio input to be captured with the video clip for this camera. You can also disable audio for this input using the switch provided.

Input Type options include *Mic* (with and without phantom power), *Line*, *AES/EBU*, and *SDI Embedded*. After connecting audio sources to the input connectors the first thing to do is select the desired *Input* and correct *Input Type* using the drop-down menus:

- Select *Mic* for professional grade microphones or other low impedance connections (use the *Mic + Phantom* option for condenser microphones requiring supplementary power)
- Choose *Line* typically for consumer type device connections (such as a CD player, computer audio output or VCR).
- Select *AES/EBU* or *SDI Embedded* to connect a digital audio source.

Note: Analog levels conform to SMPTE RP-155. The maximum input/output level is +24 dBu, nominal input level +4 dBu (-20dBFS), and the sample rate is 48 kHz.

The *Gain* slider defaults to 0dB on first launch. After adding audio sources, slowly adjust the slider to achieve an appropriate signal level (use the VU meters in the titlebar above the monitor as an aid.)

Tip: Most numeric controls in on the Replay Desktop can be reset to their defaults using Shift + double-click on the control knob.

3.11 NETWORKING

Connecting 3Play to a *local area network* (LAN) may require additional steps beyond those mentioned back when we discussed Microsoft Windows™ activation (Section 3.2). Here is the basic procedure involved in joining a *workgroup*:

1. *Connect a suitable cable from the ETHERNET port on 3Play's backplate to your external network.
2. (If necessary) – close the *Replay Desktop*; click the *Back* arrow to return to the *Home Page*.
3. Click *Shutdown*, then select *Exit to Windows* at right to access the operating system's own desktop.
4. Right-click on the *My Computer* icon, and select *Properties*.
5. Scroll down in the right hand pane of the *System* panel that opens to find the *Computer name, domain and workgroups* settings area.
6. Click the *Change Settings* link at right.
7. Click the *Computer Name* tab of the *System Properties* panel that opens.
8. Click the *Change* button, and enter the name of your local workgroup, as provided by your system administrator.
9. Close the *OK* button.
10. Close the *System* control panel.
11. At this point**,** the network connection should be functional. If further help connecting is required, please consult your system administrator.

Note: 3Play Mini features internal Wifi support, and thus can be used without any need for a physical network connection.

The next section (Chapter 4, Live Production Walkthrough) will guide you through your first experience using 3Play.

4 LIVE PRODUCTION WALKTHROUGH

This chapter provides a quick hands-on tour of the major components and functions of your NewTek 3Play™. In a very short time, these basics will be second nature to you.

More detailed reference material on all aspects of 3Play follows in Part II (Reference).

Having made the essential external connections in the previous section, let's start your first 3Play™ session, and skim through some important fundamentals:

- Session configuration and launch
- Monitoring and related features
- Recording and marking events
- Playing clips
- Working with metadata
- Creating a highlight reel.

4.1 CREATING A SESSION

We ran through the basics of starting new *sessions* and configuring devices back in sections 3.6 through 3.8. (If you need to review this information, go ahead and do so now. We'll look at these items individually again later in Part II (Reference), too.)

Figure 31

1. On the *Startup > Home page*, click the *New* button on the icon ring (Figure 31), and configure a new 1080i session. Name it “Practice Session” (without quotation marks).

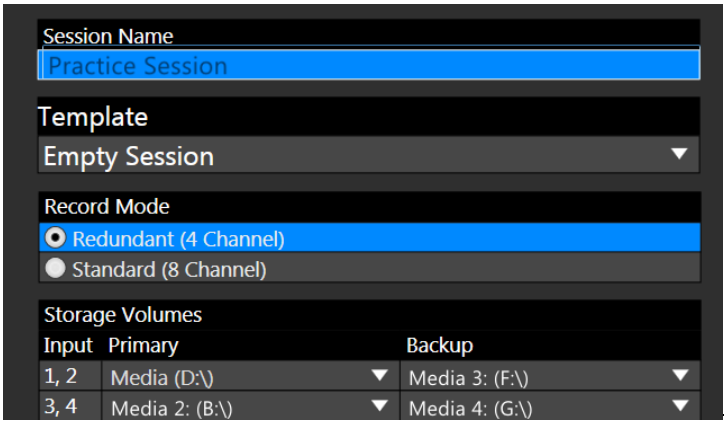


Figure 32 – 3Play 4800 shown

Note: For 3Play 4800, we recommend the “Redundant (4 Channel)” Record Mode for most purposes.

2. As part of the session setup process, assign different camera pairs to individual drives, under *Storage Volumes*.

3. The *Startup > Session page* will appear when you click the *Create Session* link at right.

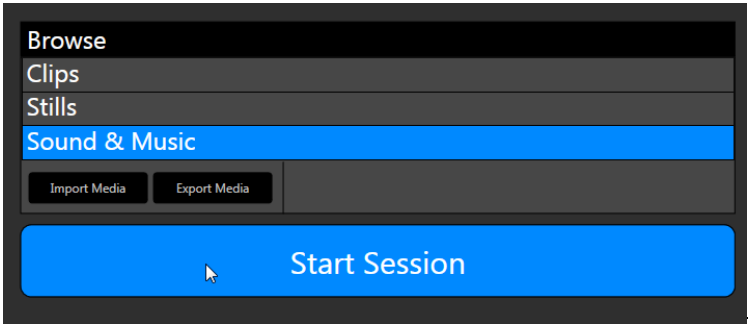


Figure 33

(Glance around this screen, which provides some useful session asset management tools, but we're going to press on to other features right now.)

4. To move on, click *Start Session* (Figure 33) to launch the *Replay Desktop.*

4.2 THE REPLAY DESKTOP

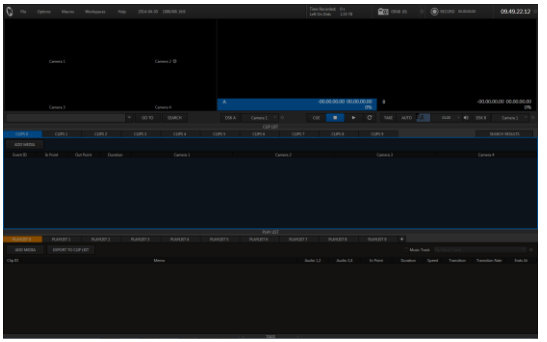


Figure 34

5. At this point, you should see the blank *Replay Desktop* (Figure 34).

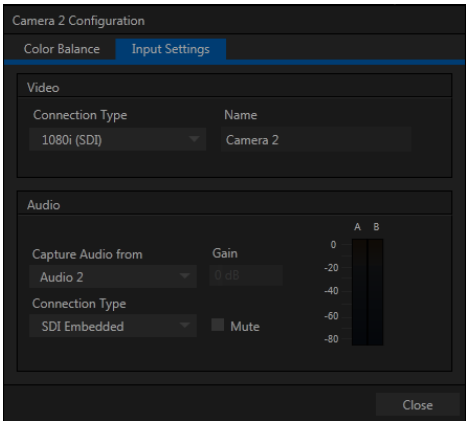


Figure 35

6. We discussed configuring input and output connections and devices for new sessions back in sections:

   - 3.4 (Input Connections)
   - 3.7 (Configure Video Outputs)
   - 3.7.4 (Multiview)
   - 3.10 (Configure Audio).

   Review these points if necessary, and set up your connections (we're assuming at least 3 cameras are connected as we continue).

4.3 CHANNEL AND SOURCE DELEGATES

7. Press *A* on the *Control Surface* to set the current *Channel Delegate*.

Note: See Section 8.1 (Dual Channel Replay) for details of 3Play's A and B channels.

8. Press *LIVE* to set the *Source Delegate* – see Section 8.3.

9. Hold down the *ANGLE* button, push *3* on the number pad, and release the *ANGLE* button to delegate the live source from 3Play's input 3 to *Channel A*.

10. Push *B* on the *Control Surface* to change the *Channel Delegate* to *B.*

11. Press *LIVE* again, to set the S*ource Delegate* for Channel B – note that outputs have independent *Source Delegates.*

12. Hold down *ANGLE* again and push *1* to delegate *input 1* to *Channel B.*

4.4 RECORD

13. Watching *Channel B*, push the *STOP* button on the *Control Surface*. Hmmm, that didn't seem to work. Let's try something else.

14. Pull the *T-Bar* to about the middle of its stroke. Still watching *Channel B*? See anything happen? No.

Why did playback ignore our *Control Surface* operations and continue at normal speed? This is because we did not first enable recording. Stopping (or jogging) the *Speed* of a *LIVE* source would automatically kick playback into *Delayed* playback - *if it could*. However, this requires 3Play to be *recording*.

Let's try all of those steps again, after enabling recording. Remember that *Speed* (for *Channel B*) is still set to around 5o% (*Channel A* is still be at the default speed, 100%)

15. Press the red *REC* (Record) button on the Control Surface, to enable capture.

Notice that the *Record* button on the *Replay Desktop* lights up, and a nearby time counter starts keeping track of the total video recorded in the current session.

Also, a new 'single-frame' duration event row was added to the *CLIP LIST*, with memo entries indicating that recording was started (this even is referred to as a "record event").

> *Note: Recording is also initiated automatically if you press either IN or OUT. To end recording, hold SHIFT down while pressing REC.*

16. Press *STOP* – note that video playback on *Channel B* is arrested (*Channel A* is unaffected, and continues playing).

17. Press *PLAY*. Playback on *Channel B* resumes in *Delayed* playback mode, at 1/2 normal speed.

> *Tip: In this state, the Channel Info pane below the monitor for Channel B a "DELAYED" label. The timecode field will fall progressively further and further behind Live, thanks to the slow motion playback speed. The Channel Info pane also shows the active Speed value as a percentage.*

18. Press the *T-Bar* to the top (*100%)* setting. Notice that the 'behind live' time display locks, since output (though *Delayed,* not *LIVE*) is no longer falling *further* behind.

4.5 MARKING EVENTS

With recording enabled, continuous capture of inputs configured for recording when creating the session (in *Startup*) is taking place. (Notice that the *CLIP LIST* shows an event row in its tabular pane that tells you when recording commenced.)

4.5.1 TWO –BUTTON MARKING

19. Push the *IN* button, which is how you set an *In Point* for a new event. Note that when you do this, a new event row is added to the *CLIP LIST*.

This new event can be referred to as an 'incomplete' event, because it has an *In Point* but no *Out Point*.

20. Keep an eye on the *In Point* column for this incomplete event, and push *IN* again. Notice that the *In Point* updates when you do this.

21. Complete the current event in the *CLIP LIST* by pressing the *OUT* button on the *Control Surface.*

Note that the event now has both an *In Point* and an *Out Point*, and the (calculated) *Duration* for the event is also now shown.

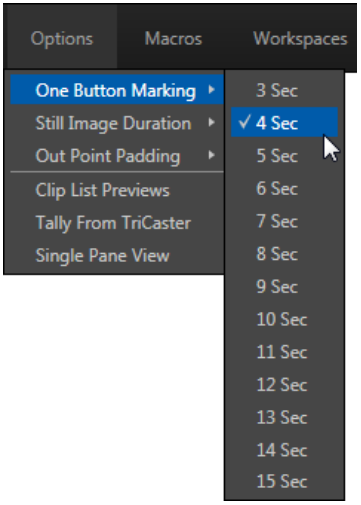


Figure 36

22. Click the *Options* menu at left in the *Dashboard* and slide down to the menu item labeled *One Button Marking*. This lets you change the default duration value for this handy feature. (The default setting is fine for our current purposes, but we wanted you to see where this useful item is.)

Tip: Below the One Button Marking menu, notice the Out Point Padding setting. The default setting is 'Infinite' … possibly just a bit optimistic (unless you have exceptional longevity and a bottomless hard drive), but handy nonetheless when you want playback to continue past the end point of clips you play, rather than stop when the Out Point is reached.

4.5.2 ONE–BUTTON MARKING

23. Finish marking any incomplete event, if necessary, by pressing *OUT*.

24. Wait for a few more seconds to elapse, and then press *OUT* only – without pressing *IN* first.

25. Repeat this step several times, allowing a few moments to pass between repetitions.

Notice that – even though you haven't pressed IN first – new 'complete' events have been added to the *CLIP LIST*. As expected, the duration for each of these new events is four seconds. The *Out Point* was set when you pressed OUT, and a suitable *In Point* is assigned as required.

4.6 LIST NAVIGATION

26. Press the |◀ (*Previous*) button on the *Control Surface*.

Nothing happens. This is because you are still in *LIVE* mode.

27. Press the *CLIP LIST* Source Delegate button. A bright border is added to the *CLIP LIST* module, and the background of the *Channel Info* pane under the (*B*) monitor changes from green (representing *LIVE*) to blue (*CLIP LIST*).

28. Now that the *CLIP LIST* is delegated to *Channel B*, press the |◀ (*Previous*) button again. You'll see that the view on the current *output* updates to show the prior event (the row above in the *CLIP LIST*), and the blue highlight in the *CLIP LIST* moves to the *Memo* column of a clip in that event row.

29. Press ▶| (Next) to return to the original event.

30. Let's try something slightly different. Find (or create, using IN/OUT) a clip that is at least 15 seconds long. Keep an eye on the output monitor as you perform the next steps.

31. Press ▶ (*PLAY*) to initiate playback, wait just *one* second– then press |◀ (*Previous*).

Did you notice what happened?

- Playback of the current clips was interrupted
- The playhead jumped back to the same angle of the previous event row
- Playback resumed from the first frame of that prior event

Let's repeat this now, but with one slight change:

32. Perform steps 31 and 32 again, but this wait five seconds or so before pressing the |◀ (*Previous*) button.

This produced a different outcome:

- Playback of the current clip was interrupted
- The playhead jumped back to the first frame of the current clip
- Playback resumed

Tip: Simply tapping the |◀ (Previous) button during play in this manner provides a very useful 'Let's see that again' function.

Keep an eye on the CLIP LIST for this next bit:

33. Press *STOP*. Try out the left, right and up down arrow keys. The thing to notice here is that the video shown on the corresponding channel's output monitor updates immediately as you navigate around in the *CLIPS LIST* (or *PLAY LIST*, for that matter).

Let's vary the above in one respect:

34. Navigate to a clip, and press PLAY.

35. Now try using the arrow keys to move around in the list.

Tip: If currently delegated source is LIVE, use of the arrow keys normally returns you to either the CLIP LIST or PLAY LIST, whichever you used last. However, if you marked a clip since switching to Live passthrough, control always goes back to the CLIP LIST selection when you use the arrow keys, providing another way to quickly return to the most recent clip.

Notice that the blue selection highlight moves from cell to cell as it did before, but the red 'play indicator' remains on the currently row in the *Event ID* column at left. The clip shown on output does not update as a result of selection operations during playback.

This is a deliberate design feature, allowing you to perform commenting and other clip management chores without interrupting playback.

Note: You can even use the keyboard or mouse to edit PLAY LIST entries without interrupting a CLIP LIST angle playback, and vice versa. However, changing source delegates using the CLIP LIST or PLAY LIST buttons on the Control Surface updates the source on output immediately – whether playback was underway at the time or not.

4.7 MEMOS AND TAGGING

36. Delegate the *CLIP LIST*, if necessary.

37. Observe that some rows probably contain "record events" (see Section 4.4) from prior experimentation. Navigate to an event with no *Memo* field entries, and select a *Memo* cell.

38. Use the keyboard to type "touchdown" (without quotes). Observe that your text entries appear immediately in the *FastClip dataview* (Section 2.6.4), but are not immediately added to the selected *Memo* cell (Section 2.6.8).

39. Press the *ENTER* key on the *Control Surface* (or keyboard). Note that this pushes your input (touchdown) into the currently highlighted *Memo* field.

The *FastClip dataview*:

The *dataview* displays cached textual data. Think of it as a simple 'box'. You put 'stuff' in the box. Afterward, you 'do things' with the box contents.

What makes *this* 'box' special is that there are so many ways to quickly and easily put 'stuff' into it; and so very many *different* and *useful* 'things' you can do with its content afterward.

For full details, please see Sections 2.6.4, 8.14, 8.15, 11.3.1, 11.3.2, 11.3.3 and Chapter 13.

Let's do this again, with a twist:

40. With the same *Memo* entry selected, type "field goal". Your new entry will replace the previous content of the *dataview*, but to this point, the existing *Memo* ("touchdown") is not modified.

41. This time, hold down *SHIFT* before pushing the *ENTER* button on the *Control Surface* (or keyboard).

The use of *SHIFT* with *ENTER* produced a different result. Rather than merely replacing the current *Memo* entry with the new value from the *dataview* into the only, it pushed "field goal" into all *Memo* cells for the current event row.

The SHIFT plus *ENTER* combination supports one other very useful outcome, too:

42. Hold down SHIFT, and use the Arrow keys to multi-select several Memo cells (whether in the same event rows or not).

43. Type "foul" into the *dataview*, then hold *SHIFT* down and punch *ENTER*. Note that all selected cells are updated.

Let's try one more trick while we're at it (you'll discover many more as you come to fully appreciate the *FastClip* workflow).

44. Select a single *Memo* cell that already has content. The value from the *Memo* is automatically snapped into the *dataview*.

Figure 37

45. Now, punch *ENTER* (*Control Surface* or keyboard), then look at what happened in the *dataview*.

In this case, rather than merely updating the *Memo* field with its own existing value, pressing *ENTER* did something special in this case. The text entry cursor in the *dataview automatically jumped* exactly one space to the right of the current *Memo* field value (Figure 37). This is the

perfect place for it to go when you want to quickly append something to the existing entry – say, a player name, or other metadata.

46. To finish up, type “smith”, and then punch *ENTER* to update the selected *Memo*.

Tip: You can set the dataview to this ‘ready to append’ state by punching either ENTER, on the Control surface or mouse, or by pressing F2 on the keyboard.

Of course, thoughtful use of *Memo* cell entries (along with *SEARCH*, discussed shortly) make it easy to find specific clips for playback, *PLAY LIST* preparation, *Publishing*, or other clip management purposes.

4.7.1 TAGGING CLIPS

Let’s see how 3PLAY’s *TAGS* module makes *Memo* cell entries even faster.

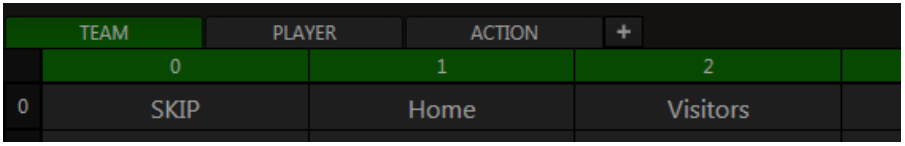


Figure 38

“Tags” are predefined text entries, prepared in tabs of the *TAGS* module, located across the bottom of *Replay Desktop*.

47. If it’s not already displayed, hold down *SHIFT* while pushing *TAGS* on the *Control Surface*.

Tip: SHIFT + TAGS toggles the minimize/restore control of the TAGS pane. See Chapter 13 for full details on the TAGS pane. Section 13.3 discusses other ways to display or hide it.

CONFIGURING TAGS

By default, the *TAGS* pane in new sessions has 3 tabs, labeled as shown in Figure 38. Assuming you have not already configured some tags, the tabbed tables in the *TAGS* pane will be empty, but for one item – the first cell in all *TAGS* tabs contains the entry “SKIP”, and is locked.

Let’s add a just a few sample tags to work with.

48. Click the *Edit Tags* button, and click the tab labeled TEAM.

> *Tip: Navigate TAGS pane tabs using the Control Surface by holding down SHIFT when pressing either of the TAB buttons.*

49. Click cell just to the right of the SKIP entry. Type "home" (without quotes) on the keyboard

50. Press *ENTER* – the cursor will automatically advance to the next cell and await further input.

51. Type "visitors".

At this point, the entries in your first *TAGS* tab should resemble Figure 38. Let's add some entries to the other default tab, and then stop to review what we've accomplished.

52. Press *SHIFT* plus the *TAB RIGHT* button to show the next *TAGS* tab (named PLAYER by default).

53. Enter "Baker" into the first empty cell (at row:column coordinates 0:2), and "Smith" into the cell at coordinates 0:3.

54. Continue adding text values to the PLAYER tab cells until first two rows are full.

55. Press *SHIFT* + *TAB RIGHT* again, advancing to the third tab. Add "touchdown" to the 0:1 cell, and "foul" to the cell at 0:2.

56. Add more values to this tab if you like, and then turn off the *Edit Tags* button.

USING TAGS

Having prepared some tags, let's try this feature out.

57. Use *SHIFT* + *TAB* as required to select the first TAGS pane tab (TEAM).

58. Make sure the *Auto Advance* button (at right in the TAGS pane titlebar) is turned on.

59. Enable the *TAGS* button on the *Control Surface*, delegating the number pad to tag mode.

60. Activate *recording.*

61. Push *OUT* on the *Control Surface* to add a new event to the *CLIP LIST*.

Tip: In our example, all entries in the first TAGS pane tab are on its top row. Thus we don't to enter a row number to identify a tag cell. That's why the bright green background appears behind the column numbers in this case. This green 'hint' informs us which digit(s) to enter next to specify a tag – in this case, just the column number.

62. Press the number "1" on the *Control Surface* number pad (don't press *ENTER* just yet).

Observe, first, that the text value "home" has been added to the *FastClip dataview*. This is the value from the 0:1 cell in the TAGS pane. Also, notice that the *TAGS* pane's *Auto Advance* feature automatically presented the next tab (*PLAYER*), and awaits further input.

Let's add some more metadata to complete our *Memo* entry for this clip.

63. Enter "03" using the number pad – again, do not press *ENTER*.

64. Now enter "02", using the number pad.

The *dataview* should now show the value "home smith foul". By entering just 5 digits, we have formed a little metadata 'sentence'. (Of course your working TAGS entries could be more or less complex, and diverse.)

65. Push *ENTER* to complete the tagging operation. (Remember that *SHIFT + ENTER* would have pushed the value shown in the *dataview* window to all angles for the current event.)

Tip: Tagging works whether the TAGS pane is displayed or hidden. Often-used tag numbers quickly become second nature, and of course it can be useful to match tag coordinates with player numbers. You will soon be writing "Memoires of a Replay Artist" using nothing but tags.

4.8 SEARCH AND GO TO

Let's experiment briefly with *SEARCH* and *GO TO*.

66. Tag or otherwise add comments to the *Memo* cells for a few different clips in different events. Use different entries for some clips, but matching entries for others. In one or two cases, add

67. Navigate to a *Memo* field – its current value is snapped into the *dataview*.

68. Push *SEARCH*.

The current *dataview* value serves as criteria for the search. Immediately, all events which have at least one clip with a matching *Memo* entry are displayed in the *Search Results* tab.

Tip: Search looks for matches for each element ('word') in the search criteria. If any single element is located in a Memo cell for a clip, the entire event - all angles - is displayed in Search Results. See Chapter 13 for full details.

A broad search criteria value can be useful at times, but may produce more results than you wish. For example:

69. Add *Memo* fields for clips in different events with the following entries:

    a. home smith tackle

    b. visitor smith foul

    c. smithers

70. Search for "smith" (without quotes). All three events with the entries above in their *Memo* cells will appear in *Search Results*.

71. *TAB* back to the original *CLIPS LIST* tab, and use the keyboard to replace the current *dataview* value with "smith foul" – but this time, do include quotation marks as shown.

This time you will get a single match in *Search Results*. *SEARCH* treats text enclosed in quotes (single or double) as one search element. Note that the search algorithm is very literal; in the example above, "foul smith" would not have produced a single match.

Let's try one more thing (again, much more on these topics can be found in Chapter 13).

72. Perform a search (your choice!) that produces a number of matches.

Now, in a real working session, you might have many tabs full of marked and commented clips. A quick, broad search will often produce numerous matches. Your eye quickly picks out that special one you are interested in, but you'd like to find its actual CLIPS LIST location, for other management operations.

73. Navigate to the event row you're after in *Search Results*, then punch *GO TO*.

That one event is immediately highlighted in its original *CLIP LIST* tab, ready for further manipulation.

Tip: GO TO normally takes CLIP ID numbers as input. Alternatively, with a timecode entry in the dataview, push SHIFT + GO TO. This engages Delayed playback mode, and jumps the playhead immediately to the specified timecode.

4.9 TRIMMING EVENTS

74. Use the *Arrow* keys to navigate the *CLIP LIST* selection highlight into the *In Point* for an event.

Normally, jogging through clips with the *JOG* wheel is bounded by the *In Point* and of the selected event. What if you want to move outside those limits to re-trim a clip?

75. Hold down *SHIFT* while jogging. This lets you move into 'uncharted territory'. Watch the current *timecode value* in the *Channel Info* pane as you do so.

76. With *SHIFT* still depressed, press *IN* to update the set *In Point* for the event.

Tip: The same method allows you to edit the Out Point. Alternatively, you can drag left or right with the mouse over a numeric field, or use direct text entry to modify the value in the dataview and then press ENTER to complete the update.

4.10 MANAGING EVENTS

77. With the mouse, drag either the *Event ID* column entry or the *Memo* field for any clip in an event up or down and release it, to re-order the events in the *CLIP LIST*.

78. Test the use of *COPY*, *SHIFT + COPY (PASTE)* and *PUBLISH* to remove events or *PLAY LIST* clips, or move them between tabbed panes.

> *Tip: You can also use standard shortcut keys (Ctrl + x, Ctrl + c, and Ctrl + v) to manage clips, or right-click Event ID or Memo fields to show a menu with Cut, Copy, Paste, Audio Level and Add to Publish Queue options.*

4.11 PREPARING A PLAY LIST

4.11.1 ADDING CLIPS

79. Select the *Memo* field for a clip in the *CLIP LIST*, and then press *ADD TO PLAY LIST* on the *Control Surface*. (A single clip is added to the PLAY LIST.)

80. Select the *CLIP ID* cell for an event instead of a *Memo*, and press *ADD TO PLAY LIST.* (Clips from all camera angles for the event are added to the PLAY LIST.)

81. Hold down *SHIFT*, and use the arrow keys to multi-select several clips by highlighting their *Memo* fields. Press *ADD TO PLAY LIST*. (All selected are added to the PLAY LIST.)

82. Using the mouse, drag the *Event ID* field for an event row onto the *PLAY LIST* pane. (Clips from all camera angles for the event are added to the PLAY LIST in order.)

4.11.2 EDITING AND PLAYBACK

83. Use the controls in the *Audio* columns of the *PLAY LIST* to adjust audio levels for the clips.

84. Click a cell in the *Transition* column, and choose a different transition from the palette that pops up.

> *Tip: To select a transition that isn't currently shown in the palette, roll over one if the nine icons, and click the + sign button that appears to see the Media Browser, which will let pick another transition to replace the current palette entry.*

85. Roll the *Jog Wheel* to move through the *PLAY LIST* sequence, and watch the output monitor. As play moves from the *Out Point* of one clip to the *In Point* of the next, note that the red 'currently playing' highlight in the *Clip ID* column at left tracks the current playback position.

86. Click the *Music Track* switch in the PLAY LIST titlebar, and then select Browse from the nearby drop-down menu to select a music file.

87. Click the gear button to the right of the music menu to access the music volume control.

88. Press *Play*, and notice that playback commences from the current position.

4.11.3 SPEED CONTROL

You can set *Speed* independently for each clip in the *PLAY LIST*, in similar fashion to setting audio levels. But you can also make interactive speed adjustments even during playback.

89. Press *Play*, and then adjust the *T-Bar* while watching the output monitor, and the speed percentage readout in *Channel info*.

T-Bar and the setting for each *PLAY LIST* clip in its *Speed* column combine to produce the actual playback rate. For example, if the clip's *Speed* in the *PLAY LIST* table is 50%, and the *T-Bar* is also at 50%, the actual playback rate will be 25%. Note that the *Channel info* display only reflects the current *T-Bar* position.

Tip: Note that although the maximum Speed you can set using presets or the T-Bar is 200%, but the PLAY LIST control let you set Speed all the way up to 400%.

4.12 RENDERING A PLAY LIST

90. Click the *Export to CLIP LIST* button in the *PLAY LIST* titlebar.

Selecting this item ultimately melts the entire PLAY LIST project down to a new clip and adds it to the *CLIP LIST*.

Note: Rendered PLAY LISTs, like other CLIP LIST entries, can be exported (to various popular file formats or as-is) using the Export Media feature in the Sessions page in Startup. See Section 5.3.1.

91. As we've reached the end of our introductory walkthrough, press *SHIFT + REC* to stop recording.

92. Then select *Exit* in the *File* menu to return to the *Session* page in *Startup*.

93. Press the large 'arrow icon' at upper left to return to the *Home page*, then click the *Shutdown* icon

94. Select *Shutdown 3Play* to power the unit down.

PART II (REFERENCE)

A thorough examination of the various aspects of your NewTek 3Play™; every button, menu item, feature and control is considered in this section so you can take full advantage of your system.

5 THE STARTUP SCREEN

The *Startup Screen* is the gateway to your NewTek 3Play™ functionality, and also home to *session* management and system maintenance features.

Icons on the ring at left in the *Startup Screen* provide access to numerous functions. We'll discuss each of these in the pages that follow, but first – a review of the concept of sessions.

The *Startup Screen* appears whenever you launch NewTek 3Play™. From here, you create, configure, manage and launch 3Play sessions by making selections from the icon ring.

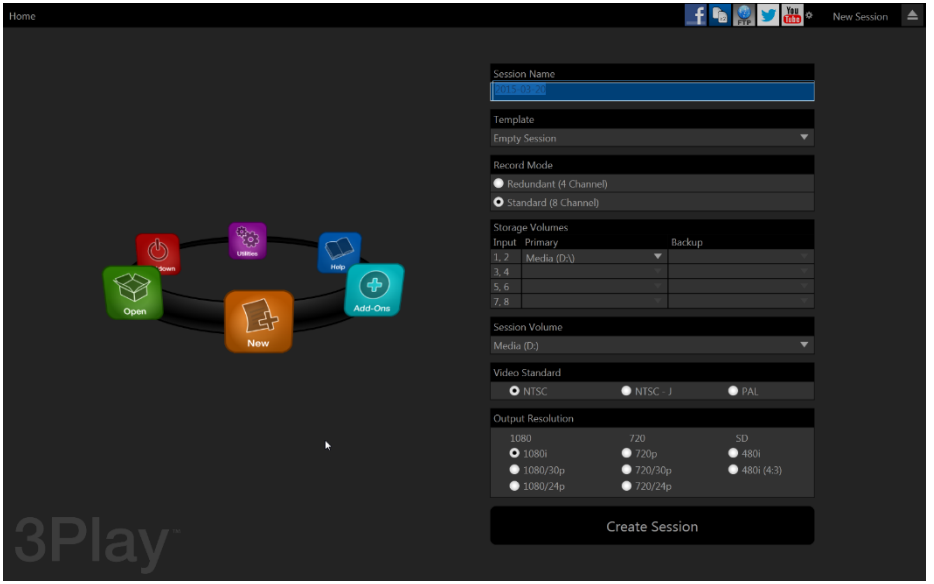


Figure 39

Your intention may be to participate in a live production, or perform asset management functions within an existing session. In either case, let's consider a fundamental concept – the *session*. What is a session, and why are sessions both important and valuable to you?

5.1 INTRODUCTION TO SESSIONS

Whenever you work with your 3Play system, you provide certain information about the production environment:

- What broadcast standard is used in your locale? Is it PAL, common in Europe among other places, or perhaps NTSC, standard throughout North American regions?
- Are your cameras or other live sources HD, SD or a mixture of both?
- How are cameras connected (are you using component or SDI connections, or a combination of several types)?

As you continue, you may make other adjustments relevant to your current production requirements:

- You might calibrate your cameras individually using the *Proc Amp* settings in the Input Configuration panels.
- Perhaps you will also use *Display Proc Amps* to adjust output color characteristics.
- What are your output device connection preferences? For example, will you send video from Channel A to a local reference monitor using component cabling, or perhaps another connection type? Will you connect a downstream switcher to Channel B using HD-SDI? What external audio connections and adjustments are required?
- You might create *PLAY LIST* pages of clips and other content, along with pages full of recorded events in the *CLIP LIST*.

The list of adjustments, activities and assets involved in a specific production goes on, but the main point to grasp here is that the *session* entails of all of the above, collectively. Assuming you do not deliberately delete the session, all of your media and all of your settings are ready for immediate recall.

When you re-open an existing session, it's just as if you were continuing an earlier event. Thus, if you return to the same venue another day under basically similar conditions, you can opt to simply re-open your prior session and be virtually ready to go. (Professional wisdom, of course, calls for testing everything before actually beginning the event.)

Naturally, you can store multiple sessions and load any session freely. This greatly simplifies business models that involve regular trips to several venues, a number of similar consecutive events, or different users with their own specific needs.

5.2 THE HOME PAGE

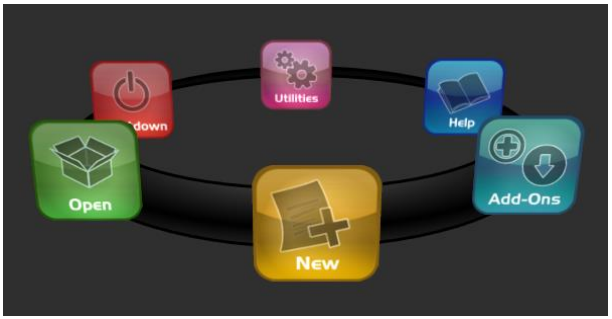


Figure 40

Having discussed sessions, let's go on to consider how you create them, and choose which one to work on when you have several to choose from.

This and a few other top level functions are found in the 3Play's *Home page*.

This primary screen is the first thing you normally encounter on launching the system. Figure 40 shows the *Home page* icon ring.

When you click an icon on the ring (such as *New* or *Open*), that item advances to the front-most position.

Tip: Alternatively, you can use the keyboard's arrow keys to cycle through the icons on the ring.

The right-hand pane of the *Home page* updates to provide options related to your selection on the icon ring.

For example, the first thing you will generally do is create a *session*. (In anticipation of this action, the *New* icon is automatically pre-selected on launch.)

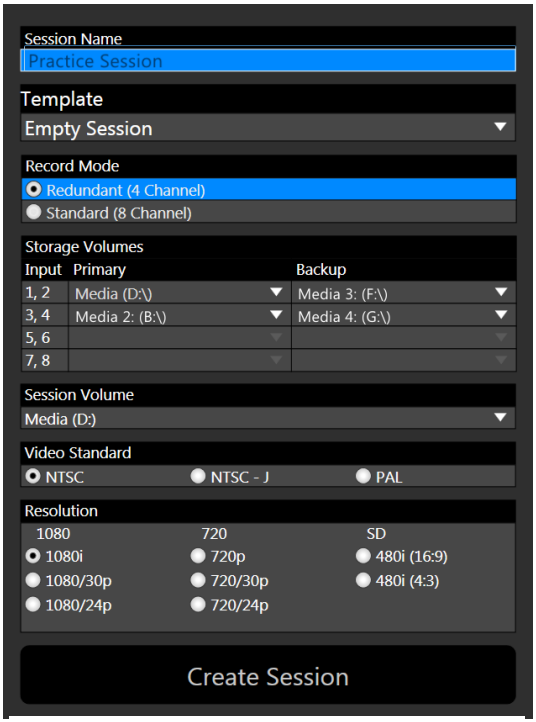


Figure 41 – 3Play 4800 shown

This results in the corresponding session options pane being displayed, as shown in Figure 41 (Multi-standard model options shown).

5.2.1 NEW (SESSION)

As just mentioned, clicking *New* on the icon ring populates the pane at right with related options. Principally, for each session you must designate (by selecting switches) your local video standard (Multi-standard model only – select NTSC, PAL or NTSC-J) and session format –1080i, 1080/24p, 1080/30p, 720p, 720/30p, 720/24p, 480/30i (16:9) or 480/30i (4:3). Multi-standard models offer PAL format equivalents.

SESSION NAME

You will see a name entry field above the session options in the pane at right. Click in this name field to provide a suitable name using your keyboard.

TEMPLATE

The *Template* drop-down menu lists all existing sessions currently available on the system.

If you select one of the entries, the new session will retain all custom settings of the source session, but will not include its *CLIP LIST* or *PLAY LIST* media content.

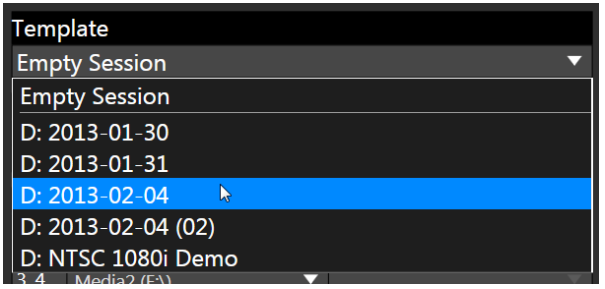


Figure 42

RECORD MODE

Figure 43

Two optional session modes offer either *Redundant (4-channel)* recording or *Standard (8 Channel)* working modes. Generally, hard drives can capture input from two live sources), while keeping up with concurrent playback demands.

REDUNDANT (4-CHANNEL)

In this mode, data for each input channel is mirrored to a second drive, providing failsafe storage and convenient sharing options for your critical footage. This limits capture to four sources (one pair of sources on each pair of drives, as it were).

Tip: The duplicate copies provide redundant data security, and also permit you to offload a complete record of the production for archival or post-production purposes while still having a working session on 3Play (the Session Volume must be mounted in this case).

STANDARD (8 CHANNEL)

Standard mode stores just a single copy of your recorded data, freeing up storage volumes to be assigned to more cameras.

STORAGE VOLUMES

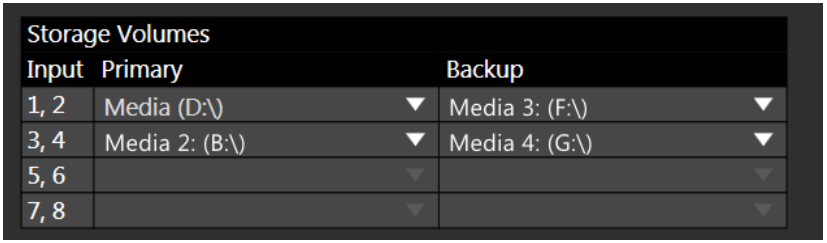


Figure 44

Beneath this you will notice a control group labeled *Storage Volumes*. In this section, you will assign one or more storage devices to be used for replay clips you will record, and other assets associated with the session.

Tip: The titlebar of the Home page has an Eject button to allow you to disconnect and remove storage media.

Suitable hard drives added to a removable drive bay or otherwise connected are listed in the *Drives* column. 3Play attempts to make an appropriate initial guess at how best to distribute the drives it detects, but you can manually select drives as well.

Note: In Standard (8 Channel) session mode, the Backup column in this area is not used.

Again, it is recommended that no more than two sources be assigned to a single volume in either the *Primary* or *Backup* drive assignment columns. If too few drives are mounted, it will not be possible to assign drives to all camera pairs.

Note: In some cases (i.e., very fast volumes) you can sidestep the restriction above (volume labels are orange if more than one input pair is assigned). However, menu rows for inputs are enabled according to the number of drives detected. Even with the world's fastest, biggest storage volume connected, another qualified drive must be detected before you can configure the second camera pair (3, 4), and so on – even though you don't plan to use the extra drive(s).

Use the drop-down menus under *Inputs* to assign drives for recording camera pairs listed in the same row.

Note: External USB drives, while suitable for backup and restoration operations, are not recommended for recording applications. Please see Section B.1.7 regarding suitable hard drives for use in 3Play's removable drive bays. See also Section 10.2, Storage Volumes.

SESSION VOLUME

Figure 45

You could think of the *Session Volume* as storing all of the 'non-a/v data' required by a session, including input settings, metadata, etc. Normally, the actual a/v files will be located on multiple drives, but the *Session Volume* you choose in this menu can be considered the 'master', and must be mounted to open (or re-open) a session.

VIDEO STANDARD AND RESOLUTION

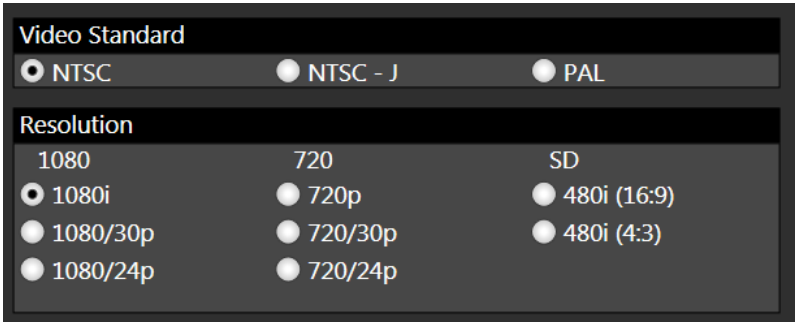


Figure 46

The format of video output by 3Play varies according to the session type. The session settings also affect capture. For example, if your session format is SD 4:3, this is the format normally captured by the *Record* function, even when the input *Connection Type* might be HD to accommodate a specific camera; the converse is also true. The frame is scaled and cropped as required to properly match the session setting, regardless of input type.

Multi-standard 3Play units show the *Video Standard* option buttons, allowing you to choose *NTSC*, *NTSC-J* or *PAL* for your session, according to your local regional requirements.

The *Resolution* radio button groups allow you to further configure the recording and output format for the new session.

Note: See Section 7.1 for more information on Video Output configurations.

Having made your selections, you would normally click the *Create Session* button at lower right (then *Create Session* to launch the *Replay Desktop);* but first, let's explore the features of the *Home page* a bit more.

5.2.2 OPEN (SESSION)

If there are existing sessions on any currently mounted drive(s), the icon ring on the *Home Page* will default to the *Open* icon (Figure 47).

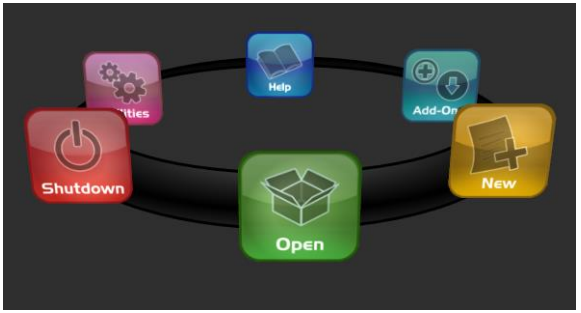


Figure 47

Selecting *Open* causes the *Sessions List* to appear at right. This pane shows all sessions stored on currently mounted drives. The *Session Name* and video format for each is listed separately under a header named for the storage volume they are located on (Figure 48).

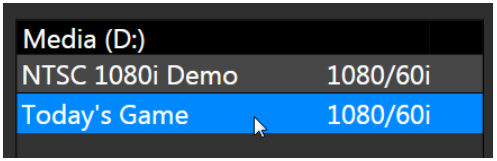


Figure 48

Note: Media configured as Read-only is not shown for the New or Open (session) features, since they cannot be used for sessions. However, Read-only media can be used for import purposes.

CONTEXT MENU

Right-click a session name to open a context menu with two items listed in it: *Rename* and *Delete*. The *Delete* function should be used thoughtfully, as it cannot be undone.

All content stored in the named session's folders on currently mounted drives will be deleted. This will include clips, images and audio files associated with the session.

Note: Content that is not local to the session but which was used in it is not deleted. For example, you may have added still images to your PLAY LIST directly from a USB thumb-drive, doing so without actually importing the files into the session. Those external files will not be deleted.

OPENING A SESSION

Just as you were able to select an icon on the ring using the left and right arrow keys, you can highlight a name in the *Session List* using the keyboard Up and Down arrows – then press the Enter key to open the session (or simply click the session name with the mouse to open it immediately). Selecting a session takes you away from the *Home page* to the *Session page*.

Let's look at the other *Home page* features briefly before we go on to open a session, though.

5.2.3 SHUTDOWN

This selection provides *Restart 3Play*, *Shutdown 3Play*, and *Exit to Windows* links in the right-hand pane. Click a selection to perform the named action in the usual manner. (In the case of the *Exit to Windows* function, you can return to the 3Play environment later by double-clicking the *3Play* desktop icon.)

5.2.4 UTILITIES

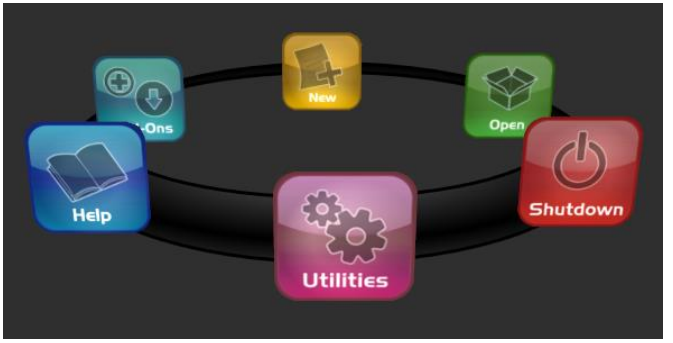


Figure 49

Selecting *Utilities* on the *Home Page* icon ring (Figure 49) presents a list of functions at right that have to do with the 3Play system (Figure 50).

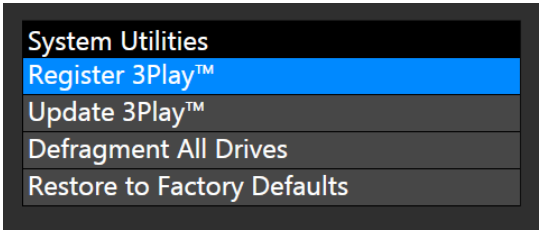


Figure 50

REGISTER 3PLAY

Registration is required to remove the watermark from output, in part to encourage you to register early. Among other reasons, doing so will serve to identify the unit to NewTek as yours in case of theft, and will also allow you to check for software updates that may have been recently released. (The steps in the Registration process were outlined back in Section 3.3, so we won't repeat them here.)

UPDATE 3PLAY

Periodically, NewTek may provide software updates for your 3Play. Updates can enhance performance, security or even add useful new features. If the system is connected to the internet, clicking *Update 3Play* will automatically access the appropriate webpage so you can check for new software patches or other downloads provided by NewTek.

Use the login details you provided when registering 3Play to enter your personal product page, click the "my downloads" link at the top of the page, and install any new updates. This way you can be sure the very latest version of the software for your system is installed.

1. Click *Update 3Play*.
2. Login to the NewTek update webpage, locate the latest update and click on it.
3. At the dialog popup, choose *Run*.
4. Comply with any onscreen prompts that follow.

Tip: If you wish, you can instead access the same webpage from a second computer connected to the internet, then transfer update files to 3Play using a network connection or perhaps a USB thumb-drive.

DEFRAGMENT ALL DRIVES

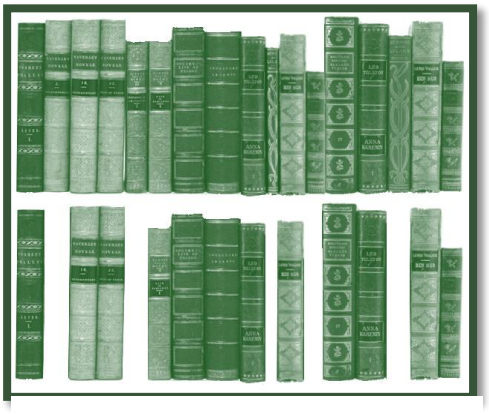


Figure 51

Over the course of time, storage volumes devoted to audio and video storage can become fragmented. Eventually, this can degrade playback performance. Defragmenting corrects this condition.

You could think of your hard drive as being like a shelf in your library. As time goes along, the shelf fills with books (data). Some are large while others are small, just as 3Play session content may be larger or smaller.

To make room for new additions, you decide to remove books you have finished with from the shelf. You remove a book here, another there, opening up gaps between the remaining books. This makes some shelf space available, but does so in the form of gaps separated by the remaining books. Sadly, when you obtain another large book, it may be too big to fit in any one of the gaps.

A foolish librarian might tear the new book into sections just big enough to fit into the open spaces on the shelf. This is would obviously be unwise. When you wish to refer to the book later you will lose a lot of time locating and assembling its sections before you can read it. How much better it would be to slide the remaining books closer together, combining all the free space first. Unfortunately, computers are 'foolish librarians'. They tend to want to fill in all the gaps in their storage areas, even if it means literally shredding your 'book' (in reality large video files from your sessions) into tiny fragments.

Defragmenting the storage volume has the same effect as sliding the books together, resulting in less and larger gaps. The end result is that 3Play doesn't have to frantically search in many different places to assemble the video data you have recorded. This process (defragmentation) can take considerable time, so it's not something you want to begin just before an important event.

BACKUP OR RESTORE SYSTEM

A complete system restore function is available in the event of an unforeseen problem. This does not merely restore the operating system, or other data files. Rather, it restores the system to an 'as-shipped' software state. Please refer to Section B.5.6 in Appendix Appendix A for full details and usage notes.

5.2.5 HELP

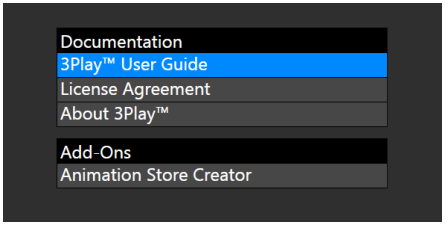


Figure 52

- Click the *3Play User Guide* link to open the manual.
- Click the *License Agreement* link to review the 3Play end user license.
- Click *About 3Play* to list version information, credits and acknowledgments.
- *Add-Ons* – documentation for the included *Animation Store Creator* application.

5.2.6 ADD-ONS

The included *Animation Store Creator* add-on application permits you to create your own custom *Animation Store* transitions (see Chapter 14).

5.3 THE SESSION PAGE

Opening a session from the *Home page* (whether using *Open* or *New*) takes you to the *Session Page* (, providing a new set of options as links at right. The name of the current session is shown in the top-left corner of the screen (Figure 53). The session is displayed in the form "Home/*session name*".

If you wish to leave the current session and return to the *Home page*, you can click the large *Back Arrow* displayed beneath the session name, or the word "Home" in the session name label.

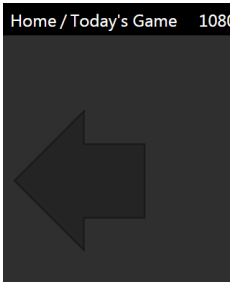


Figure 53

5.3.1 FILE MANAGEMENT

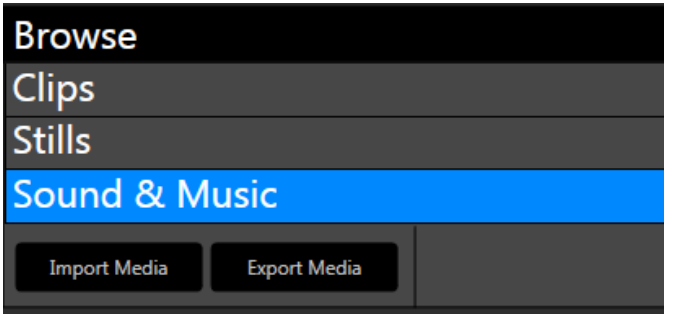


Figure 54

At times you may find it useful to be able to quickly access the various files associated with the current session. The links at right on the *Session page* under the heading *Browse* provide access to default session folders.—Clicking one of these links (or selecting it with the up/down arrow keys and pressing Enter) opens a system file explorer.

You can use the familiar features and shortcut keystrokes in these windows (*Cut, Copy, Paste, Rename, Delete* and so-on) to manage session assets.

Tip: Of course, you can open several of these folders simultaneously, and navigate these file windows to other locations as well. For example, you might copy files from one session into a folder for another.

Several other important features are found here, including *Import Media* and *Export Media* as discussed next.

IMPORT MEDIA

Clicking the *Import Media* link opens a custom import panel offering batch import of files for use in 3Play's *CLIP LIST* and *PLAY LIST*. It even allows you to transcode files to appropriate high quality 3Play-friendly file formats at the same time if you wish.

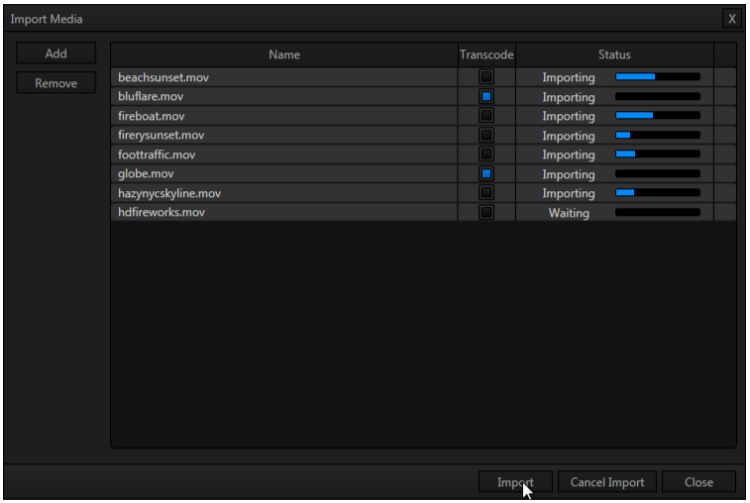


Figure 55

Import Media's quick processing makes this the fastest and most convenient way to prepare production assets for a session. Click *Add* to open a standard system file window, and select (or multi-select) items to build a list in the *Import Media* file pane.

Some highly compressed video files may not be well suited to live playback. Enable switches in the *Transcode* column for files you wish to convert to a friendlier format on import. Files can be re-ordered by dragging their entries up or down with the mouse, or removed from the list by highlighting them and clicking *Remove*.

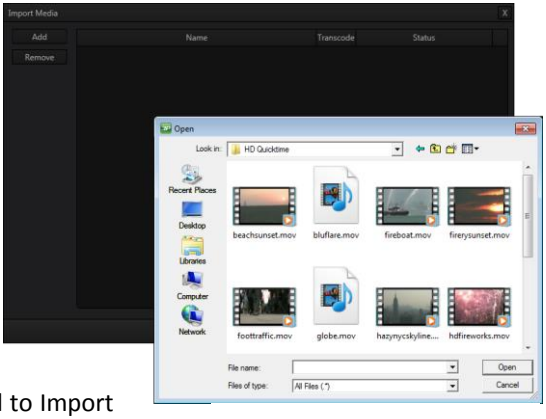


Figure 56

Once the batch import list is prepared, click *Import* to complete the operation. Files are processed quickly, and are automatically added to Import folders properly located according to type for easy access in different modules as required during live production.

Note: Sections 11.1.5, B.4.2 and B.4.3 discuss other aspects of importing media files.

EXPORT MEDIA

Clicking the *Export Media* link opens a new panel - Figure 57.

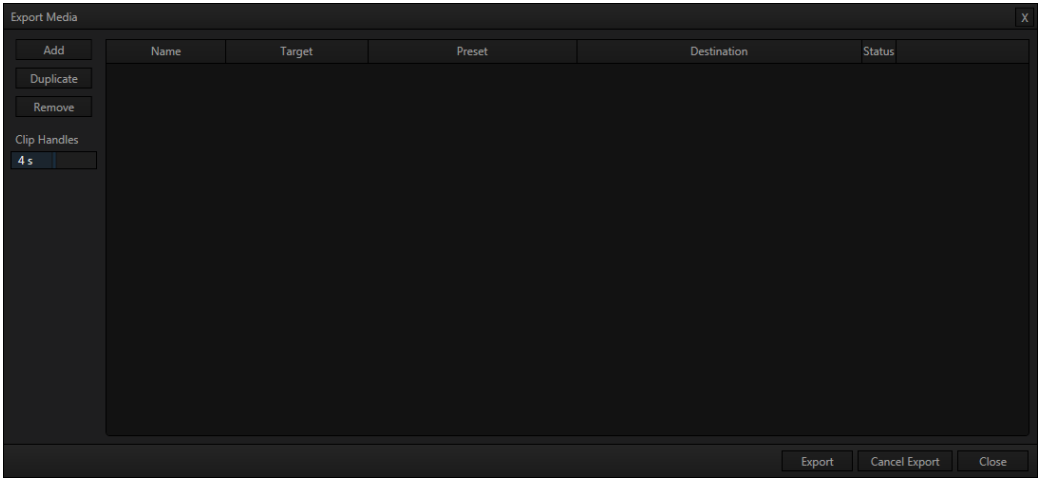


Figure 57

The *Export Media* module allows you to create a list of video clips for export, even selecting a new file format for individual exports to be converted to and designating where to send them.

Click the *Add* button at upper left to open a special *Media Browser* which shows clips you have marked in the session, including their *Memo* field comments.

Use this pane to locate and select (or multi-select) video clips for export, choosing from the *CLIP LIST* entries for the current session (see Section 11.1.5 for browser details). Multi-clip selections are supported.

Tip: The Export Media panel can be resized by dragging its edges or corners with the mouse.

After selection, click *OK* to add the clips you chose to the *Export Media* file pane. The file pane is much like a spreadsheet table, listing all files in the current export batch in its first column, then the current settings for each file in other columns on the same row. A *Status* column shows the current export status or progress for each file in the list.

TOOLS

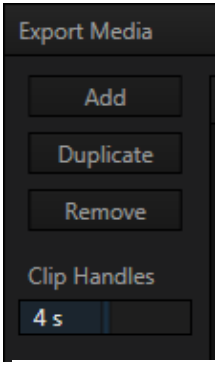


Figure 58

Note that the *Export Media* file list pane also supports multi-selection. When a file (or group of files) is selected, you may use the *Duplicate* and *Remove* buttons at right to either clone or delete entries in the list.

The *Duplicate* feature is very useful for cases when you wish to export a file to multiple target file formats to be used for different purposes or in different applications.

The *Clip Handles* control is a numeric slider that allows you to pad the exported clips beyond the limits of their current in and out point (presuming the recorded frames to support this feature exist). This is often useful for post-production purposes (the value is in seconds.)

Tip: Once files have been added to the export list, you can multi-select using standard Shift-click or Ctrl-click techniques, then apply options to all selected files in one operation.

TARGET, PRESET & DESTINATION

Having prepared the file list, click the triangle button in the *Target* column to open a drop-down menu listing broad categories of export format presets you can choose. A similar *Destination* button opens a system file browser to let you designate (or create) a location for file output.

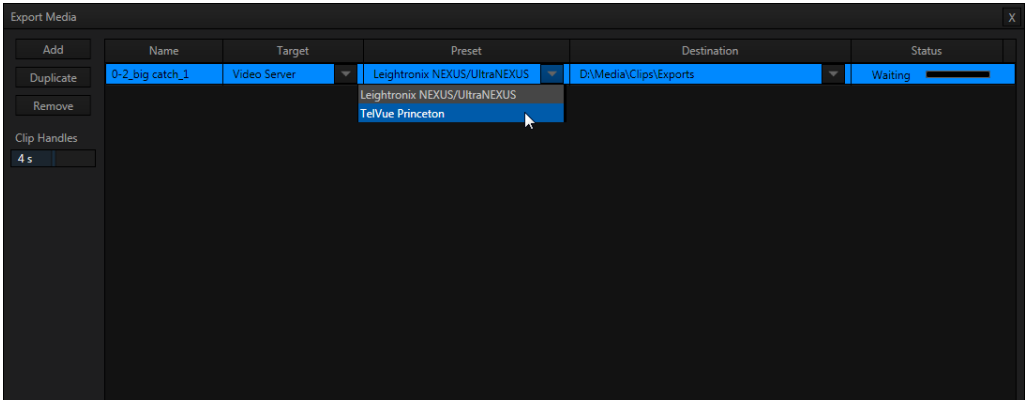


Figure 59

Each file to be exported can have its own *Target*, *Preset* and *Destination* settings. The export presets shown vary, according to what is appropriate for a given session format. Available export file formats are updated from time to time to include popular new formats. Here are some examples, as they appear for an HD session (formats and details subject to change):

- *Application*
  - *Adobe Premiere Pro®* - high quality MPEG-2 Program Stream, full raster, 4:2:2 sub-sampling, variable bitrate (100 Mbps nominal).
  - *Apple Final Cur Pro® (.mov)* – very high quality M-JPEG encoding, full raster, 4:2:2 sub-sampling, high compatibility.
  - *Grass Valley Edius®* – high quality HD encoding, full raster, 4:2:0 sub-sampling, high bitrate (up to 100 Mb/s).
  - *NewTek SpeedEDIT™* – high quality MPEG-2 Program Stream, full raster, 4:2:0 sub-sampling, variable bitrate (up to 100 Mb/s).
  - *Sony Vegas®* – high quality MPEG-2 Program Stream, full raster, 4:2:0 sub-sampling, variable bitrate (up to 100 Mb/s).
- *AVI*
  - *DV/DVCPro (.avi)* – moderate quality, SD only (NTSC 720x480, PAL 720x576), 25Mbit/s, 4:1:1 (NTSC) or 4:1:0 (PAL) sub-sampling, very broad compatibility.
  - *MJPEG* (.avi) – moderate quality, SD or HD capable, 4:2:0 sub-sampling, broad compatibility.
- *DVD*
  - *(x) minutes (.mpg)* – SD-only MPEG 2, quality presets up to 9MB/sec bitrate (≈60 minutes) with 4:2:2 sub-sampling.
- *Flash/Flash 9*
  - A diverse collection of presets suitable for playback in newer or legacy Flash® players.
- *Mobile Devices*
  - Presets suitable for use with *Android™*, *iPad™*, *iPhone™* or *iPod Touch™*.
- *Quicktime*
  - *Renderless Conversion* – high quality 'wrapped' Quicktime file.
  - *DV/DVCPro (.mov)* – moderate quality, SD only (NTSC 720x480, PAL 720x576), 25Mbit/s, 4:1:1 (NTSC) or 4:1:0 (PAL) sub-sampling, very broad compatibility.
  - *h.264 Highest Quality (.mov)*
  - *h.264 Very Good (.mov)*
  - *MJPEG (.mov)*

- *Same as Source* – file copy (no re-rendering)
- *Video Server*
    - *Leightronix NEXUS**Ultra NEXUS* – SD (NTSC 720x480, PAL 720x576), high quality, MPEG2 Program Stream, 9Mb/s variable bitrate, 4:2:2.
    - *TelVUE Princeton* – SD (NTSC 720x480, PAL 720x576), high quality MPEG2 Program Stream, 9Mb/s variable bitrate, 4:2:2, NTSC 720x480 (PAL 720x576).

Tip: The time an export takes is affected by numerous factors – the number, duration and resolution of the selected files, the speed of the device selected as target for the files, the designated format, and so on.

It is generally unwise to commence a file export shortly before a live event, since you cannot launch 3Play's Replay Desktop during export. If necessary, you can cancel the current export operation.

Next, use the *Destination* field drop-down to designate a target folder for exported files to be sent. A progress gauge is shown during file processing. Click the *Export* button at the bottom of the dialogue to begin batch export processing.

Tip: It is possible to selected mapped network locations (with a drive letter assigned) as the Destination, saving time later.

FORMAT NOTES

When export presets that do not support HD are selected during an HD session, the clip is automatically scaled to fit the selected file format. This is a convenience, but be sure to select a preset suitable for your ultimate needs.

In a somewhat related matter, note that 3Play records files from external sources in their native formats – which may or may not match the session format. For example, an SD camera recorded by 3Play during an HD session is nevertheless recorded as SD. When exported, the recorded SD clip will export as SD.

Finally, note that clips you imported into a session are simply exported as-is (that is, without transcoding) if added to the file list in *Export Media*.

6 THE REPLAY DESKTOP

The *Replay Desktop* serves as your production control center. It provides control over input and output configuration, recording, clip marking, PLAY LIST preparation and playback, and much more.

This chapter provides a top-level view of the Replay Desktop, with more detailed information following in subsequent chapters.

The *Replay Desktop* is launched by creating (or opening) a session in the *Startup Screen*, then clicking the large *Start Session* button.

6.1 OVERVIEW

The *Replay Desktop* requires a minimum screen resolution of 1600 x 1050.

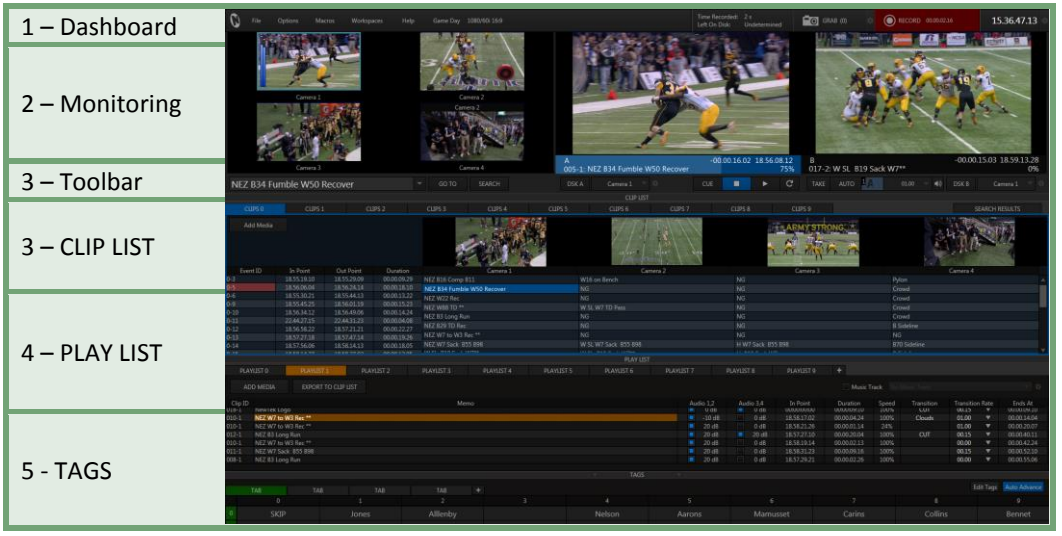


Figure 60

The *Replay Desktop* provides visual feedback for operations, including monitoring features, clip marking, and so on. By default, it is divided into six horizontal bands (Figure 60).

From top to bottom, these are:

1 - Dashboard

- Menus (settings and options), quick access to *Grab*, *Record*, and timecode

2 - Monitoring

- *Input Monitors* - monitor all active inputs for the session
- *Output Monitors* - large full-time monitors for *Output A* and *B*, with *Channel Info* displays
- (Configurable *Multiview* display on secondary monitor)

3 - Toolbar

- *FastClip toolbar* - displays clip /event data and text input, includes *Search* tools
- *Transitions, Overlays* and *Transport* - playback, program-preview transitions and DSKs

4 - CLIP LIST

- Speadsheet style event management; lists marked events as rows with *In Point*, *Out Point* and *Duration*
- Trim, re-order and organize events in renamable tabs
- Add unique comments for individual clips (angles)
- Select and play clips
- Integral *clip monitors* show all angles of the current event row simultaenously
- *Search* results tab

5 - PLAY LIST

- Add clips and other content to create highlights reels, complete with optional transitions and music
- Export play lists, including transitions and sounds, as rendered clips

6 - TAGS

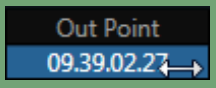
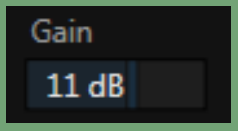
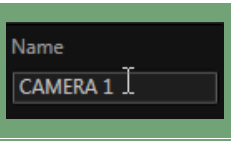
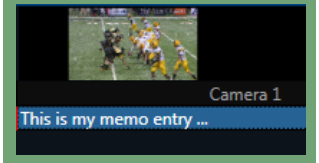
- Powerful tagging system; quickly add pre-defined tags to the *FastClip dataview* for commenting, *Search* and more

6.2 A FEW HINTS

You will find various types of user controls in the *Replay Desktop*. Some examples are shown in the table below. Several convenience features are associated with these controls.

- As you would expect, all slider controls (whether their motion is vertical or horizontal) can be set to a new value by holding down the left mouse button and dragging in the direction of the control orientation.

- Hold down the keyboard *Shift* key and double-click most controls to reset the associated value to its factory default.

Control Type	Type	Examples	Usage
	Numeric field	In Point, Out Point, Duration, Crossfade, etc.	Drag in line with the control orientation to raise or lower the current value. Or select and type, and then press Enter. (Esc to cancel changes.)
	Numeric slider	Audio Gain, Proc Amp controls, etc.	Drag in line with the control's orientation to raise or lower the current value. Or select and type, and then press Enter. (Esc to cancel changes.)
	Text field (dialog)	Input and Output Configuration panels	Click the field to activate it, and then type.
	Text field (list)	CLIP LIST – Memo	Select field and type, and then press Enter. (Esc to cancel changes.)

Tip: To make very fine adjustments to slider values, hold down the Ctrl key on your keyboard while dragging with the mouse (this increases accuracy by a factor of 10.)

6.3 CUSTOMIZING THE REPLAY DESKTOP

The *Replay Desktop* offers several convenient provisions for tweaking the user interface to suit your particular needs.

6.3.1 RENAME

As charming as descriptive names like *Camera 1*, *Camera 2* and so on are, we must admit that it's possible you might wish to change these default labels to something localized.

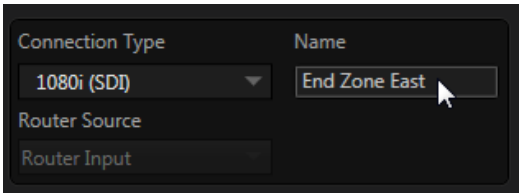


Figure 61

To do so, click the *Configuration* button (gear icon) at right in the monitor titlebar for a given input. The *Input Configuration* panels have editable *Name* text fields.

6.3.2 DUAL DISPLAYS AND MONITORING

The *Replay Desktop* monitor tabs and *Multiview* options can be flexibly combined to show what you want to see, where you want to see it.

With a suitable monitor connected to 3Play's *Multiview port* – open the *Workspaces* menu in the Dashboard at the top of the *Desktop*. Select *Out/In/Clocks* in the *Multiview sub*-menu. Then position the mouse pointer over the horizontal CLIP LIST *drag bar* (the mouse pointer becomes a double-headed arrow). Click and hold the mouse button, and drag the bar all the way to the top of the screen.

This provides a useful full-screen *CLIP LIST* and *PLAY LIST* view, while still being able to monitor input and output on the *Multiview* display. Likewise, you can drag the horizontal divider

between the CLIP LIST and PLAY LIST to re-size them to taste. (Feel free to revert to the standard view if you prefer.)

6.4 DASHBOARD TOOLS

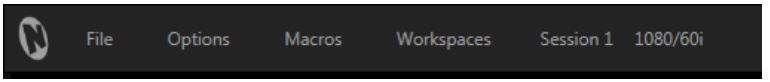


Figure 62

The *Replay Desktop DASHBOARD* (Figure 62) provides useful data. Info displayed includes:

- *File, Options, Macros, and Workspaces* menus
- *Status messages* (Section 6.4.1)
- *Session Name* and *format*

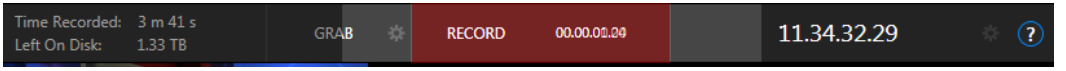


Figure 63

- *Time Recorded* and *Left on Disk* (estimate of room available at current recording rates on the 'most full' session volume)
- *Grab* tool and configuration controls
- *Record* (toggle) and *time elapsed* since the current recording began
- *Time* (from external timecode input or system clock)and *Timecode Configuration*
- *(?)* – Info button: how to access the virtual CS

6.4.1 STATUS MESSAGES

An information display is conveniently located at left above the input monitors. From time to time this bar displays information pertaining to operations or system status, including any cautionary indications.

For example, a brief initialization is required following a system start (or restart) for video playback to stabilize. During this warm-up period, an *initialization countdown* is displayed in the *Status Bar*.

Note: Status messages disappear on their own after a little while, but you can manually dismiss them by clicking the square icon shown to the left of the text message.

6.4.2 MENUS (FILE, OPTIONS, MACROS, AND WORKSPACES)

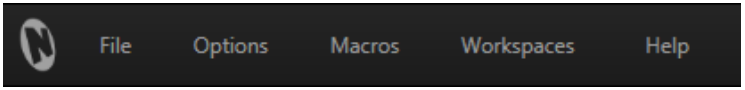


Figure 64

The *Replay Desktop DASHBOARD* has important menu options at left, discussed individually next.

FILE

- *Share Publish Queue* – Open the *Publish Queue* panel to manage content you wish to upload (share) or copy to other locations (see Chapter 15 for full details on 3Play's *Publish* features).
- *Set Publish Destinations* – Pre-configure targets for media assets added to the *Publish Queue*, whether automatically as a result of settings for the *Grab* feature, or manually from the *CLIP LIST* or *PLAY LIST* (see Chapter 15 for full details on 3Play's *Publish* features).
- *Share Media Folders on Network* – Each session has unique Audio, Clips and Stills folders for its media assets.
- This is where the *Import Media* places session content; these folders are easily located from the *Add Media* browser in the *Replay Desktop*. You can enable or disable access to the media folders related to the active session across the network using this menu item.

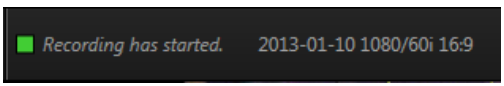


Figure 65

- *Eject* – Dismount one of the storage volumes in 3Play's hot-swap drive bays (or another external volume) preparatory to disconnection or removal.

- *Exit* – Leave the *Replay Desktop* and return to the *Session* screen.

OPTIONS

- *One Button Marking* – Section 8.10.1 discusses methods you will use to mark (define the in and out points for) *CLIP LIST* events. The "one button marking" method requires only that you press the *OUT* button; an *In point* is set automatically at a pre-defined earlier time. This menu items lets you choose the offset used for the automatic *In point*.

- *Still Image Duration* – Choose the default duration applied to still images added to the *CLIP* or *PLAY LIST*.

- *Out Point Padding* – This menu item optionally allows play to continue past the actual *Out point* for *CLIP LIST* events from a minimum period of five seconds to 'infinite' (i.e., until the recorded file ends or you press *STOP*).

- *CLIP LIST Previews* – This option (not available in 3Play Mini) toggles the display of *Clip Monitors* in the area below the *CLIPS LIST* tabs. Small previews show all recorded angles for the currently active *CLIP LIST* event row.

- *Failsafe Camera Configuration* – If you have enabled *A/V Passthrough* (See Section 7.1.3) you can use this menu item to access setup controls for (video) *Input* 8 when the session is in *Redundant (4 Channel Mode)*.

- *Tally from TriCaster* – When a downstream TriCaster is receiving 3Play's network output via one of its own Network Inputs, enable this option to shown red and green on-air tally borders around 3Play viewports (requires TriCaster Advanced Edition).

- *Single Pane View* – This powerful option can have a dramatic impact on your replay workflow:

    - Enable *Single Pane View* to collapse the *CLIPS LIST* and *PLAY LIST* panes into one 'super' module showing *CLIPS LIST* tabs at left, and *PLAY LIST* tabs at right.

    - Drag selected content from PLAY LIST panes onto other PLAY LIST or CLIP LOST tabs to copy items to the target list.

MACROS

3Play's extensive Macros system provides a wealth of powerful capabilities. Macros and related tools are discussed in detail in Chapter 17.

WORKSPACES

Really, 3Play provides *two* multiview monitor displays – one right on the Replay Desktop (a.k.a., the *Interface*), normally comprising its upper third, the other a fully independent display.

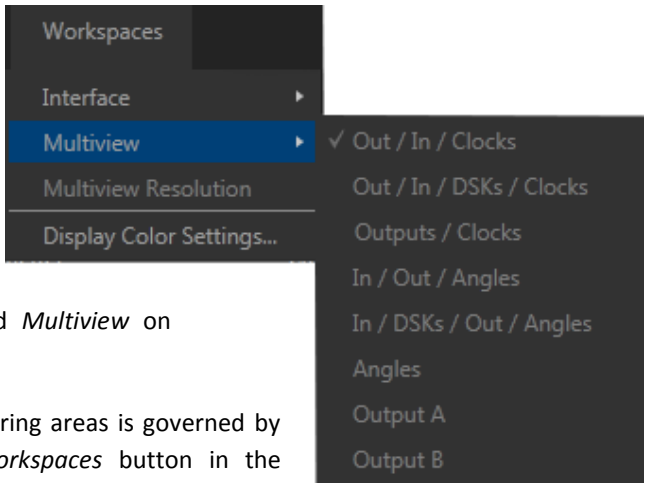


Figure 66

The latter is presented on a secondary monitor output labeled *Multiview* on the rear connector panel.

The overall layout of these monitoring areas is governed by *Workspace* presets. Click the *Workspaces* button in the *Dashboard* area at the top of the screen to display its menu.

Simply select a preset for either *Interface* or *Multiview* panes using this menu as shown (Figure 66).

Viewport also have further custom options, such as the display of VU meter overlays. See Section 9.1, Overlay Options for details.

The *Multiview Resolution* menu item lets you configure the external display device you connect. Select the native resolution of the device for best results.

Note: Changing Multiview output options can cause frames to be dropped, so modifications during live production are discouraged.

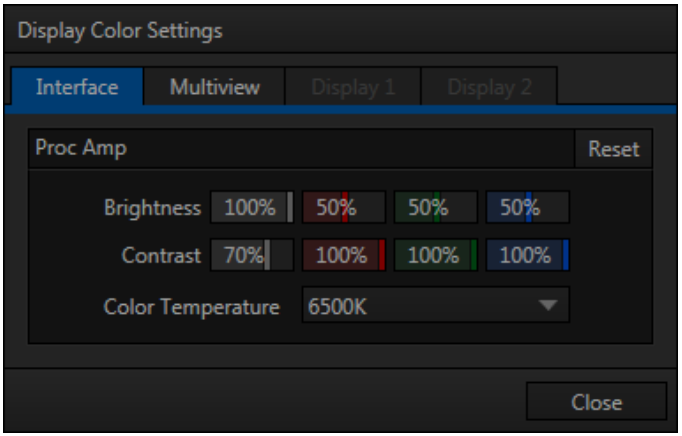


Figure 67

The final item in the *Workspaces* menu is *Display Color Settings*. Select this to open a control panel ()

Figure 67 with multiple tabs, one for each detected display. In turn the tabs are home to *Proc Amp* controls and settings for the connected display devices. These controls directly control graphics the characteristics of output to each display, and provide a great deal of convenience especially for remote displays that would otherwise be difficult or impossible to access.

6.5 GRAB & RECORD

We've discussed Record configuration back in Section 5.2.1, and will do so again in Chapter 10.

The *Grab* feature is a very convenient tool, especially for use in connection with use of the Publish features (Chapter 16) to upload imagery to popular social media sites, or for immediate display on output. See Section 10.4 for more information.

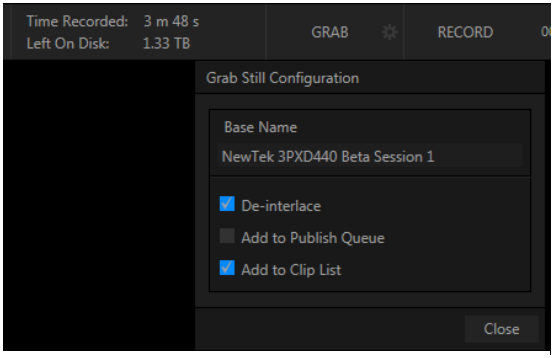


Figure 68

7 I/O CONFIGURATION

NewTek 3Play™ provides extensive control over your video signal at both input and output stages. In addition to basic format connection options for both audio and video inputs, each video source has its own realtime Proc Amp.

Other important options include support for a secondary Multiview monitor, external timecode and genlock configuration.

It is very useful to be able to configure each source and also 3Play's many outputs independently. Source configuration options ensure that you can match camera inputs to each other, and that their signals fall within legal ranges, and even mix and match different types of camera (to a point). Display *Proc Amp* settings allow you to make adjustments for special purposes.

Let's begin with a consideration of *Output Configuration* tools.

7.1 OUTPUT CONFIGURATION

To open the *Output Configuration* panel, double-click either output monitor. Alternatively, roll the mouse pointer over the *Configure* button that appears beneath the lower-right corner of either monitor and click it – see Figure 69.

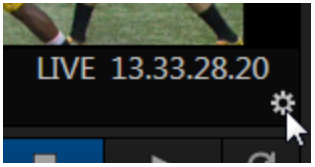


Figure 69

7.1.1 CHANNEL A AND B

Output Configuration (depending on your 3Play model) can have several tabbed panes. The first two are labeled *Output A* and *B*, and contain controls discussed momentarily. (The *Genlock* tab is home to important video timing calibration controls. We'll review it shortly, as well.)

The video format sent to 3Play's primary video outputs always matches the session format, which you choose in the *Startup* screen when first creating the session.

Note: On 3Play's rear panel, the VIDEO OUT group connectors labeled 1, 2, and 3 (3Play 4800 only) carry channels A, B, and Aux, respectively.

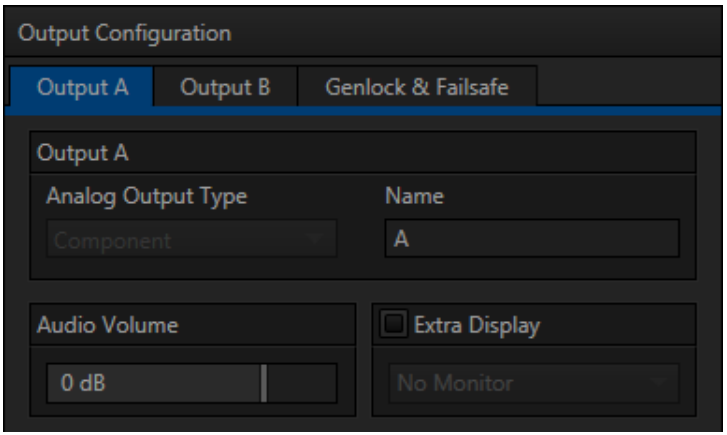
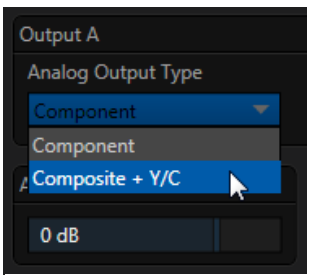


Figure 70 – 3Play 440 shown

Digital video output in the corresponding format is supplied to the SDI output connectors. Analog connections are also available for simultaneous use for these primary outputs. These provide configurable connection options, as discussed next.

ANALOG OUTPUT TYPE (3PLAY 4800 AND 440)



For HD sessions, the only suitable *Analog Output Type* in popular use is *Component*. For this reason, *Analog Output Type* options are not provided for HD sessions.

In this case, the three analog connectors in the *VIDEO OUT* rows for a given output on the system backplate are always supplied with the (component) Y, Pr and Pb signals. For SD sessions, however, you can choose between *Component* or *Composite + Y/C*.

Figure 71

Selecting this option sends a composite video signal to the first analog connector (labeled *Y*) in the *VIDEO OUT* rows on the system backplate, and simultaneously sends a Y/C video signal to the two connectors in the same output row labeled *Pb* and *Pr*, respectively.

The following table lists the signal types for each connector in the video output section:

Connection Type	BNC 1 (SDI)	BNC 2 (Y)	BNC 3 (Pb)	BNC 4 (Pr)
Component	SDI	Y	Pb	Pr
Composite + Y/C	SDI	Composite	Y	C

NAME

Figure 72

The *Name* field (next to *Analog Output Type*) is editable, allowing you to assign a custom name to each output. The name you supply will appear in the *Channel Info Panel* (Section 2.5) in the *Desktop* monitoring section and *Multiview* display.

AUDIO VOLUME

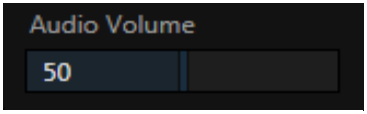


Figure 73

The *Audio Volume* slider in the *Output Configuration* panel lets you independently modulate the raw source sound level before passing it to the corresponding audio output.

Note: You'll recall (from Section 3.5.2) that the audio and video connectors for Channel A are labeled "1" in the output connector groups on 3Play's backplane, while Channel B connectors are identified by the number "2".

EXTRA DISPLAY

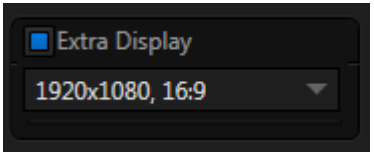


Figure 74

The *Extra Display* switch in each of the *Output A* and *B* tabs toggles output to another computer type display. (These output connections are referred to as *Display* ports – see Section 3.5.4.) The associated resolution menu allows you to select the correct setting for this monitor when connected and detected.

7.1.2 AUX CHANNEL (3PLAY 4800)

For 3Play 4800, the next tabbed pane in *Output Configuration* is labeled *Aux*.

ANALOG OUTPUT TYPE

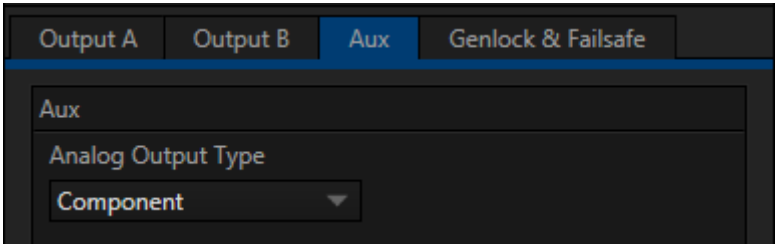


Figure 75

The third connector row in the *VIDEO OUT* group on 3Play's backplate is likewise labeled *AUX*. The sole configuration option for *AUX* governs its analog video connection type.

The same options we discussed above under the sub-heading *Analog Output Type* are offered. For HD sessions, Type is automatically set to *Component*. For SD sessions, the *Component* or *Y/C + Composite* connection type options are available.

Note: The video stream displayed on AUX is determined by the Channel Delegate active on the Control Surface at the moment. Video from the delegated channel is also sent to Aux.

7.1.3 GENLOCK & FAILSAFE (4800 AND 440)

The *Genlock* feature allows the NewTek 3Play system to 'lock' its video output to a reference video signal (house sync, such as 'black burst') supplied to its genlock input connector.

This allows 3Play output to be synchronized to other external equipment that is locked to the same reference. Genlocking is not an absolute *requirement* in most cases, but is recommended whenever you have the capability.

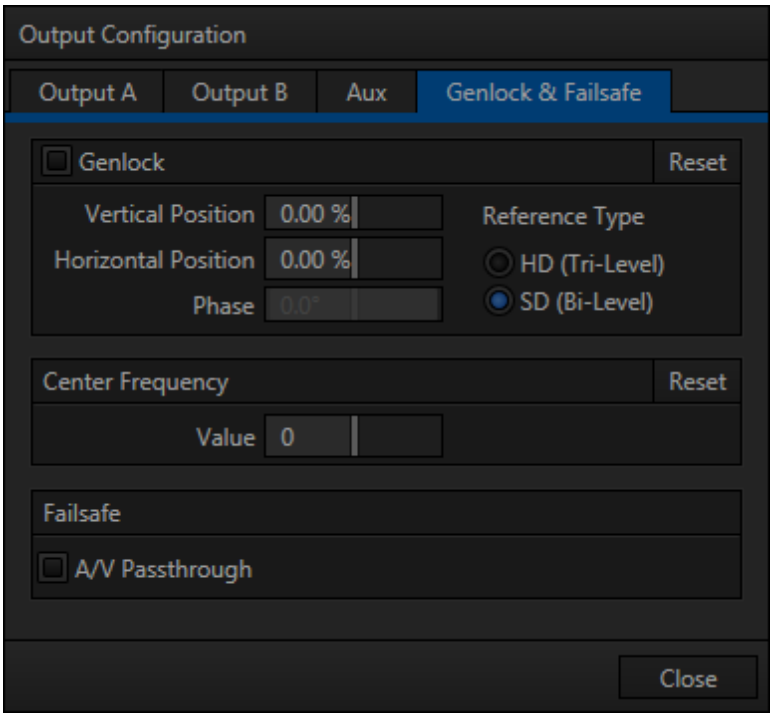


Figure 76 – 3Play 4800 shown

Tip: "Genlock" refers to "generator locking". Professional video devices often provide a "genlock input", which allows an external reference signal (often referred to as 'house sync') to control its video timing.

The output of video devices connected in this manner is synchronized to the reference signal, and they are referred to as 'genlocked'.

The 3Play system accepts input from multiple video sources. Miniscule local timing differences between these may result in tiny delays during downstream switching operations.

Serving the same reference signal to i) the system's Genlock input and ii) other video devices in the chain is the best approach, and ensures a match between 3Play system output and any downstream video devices required to handle both it *and* any other (genlocked) sources.

VERTICAL POSITION, HORIZONTAL POSITION AND PHASE

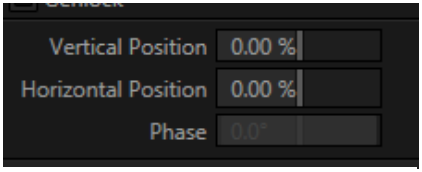


Figure 77

Locking all devices to house sync is important, but this alone does not actually ensure a perfect downstream match.

Consider an army marching along: each step the soldiers take occurs at precisely the same moment, so we could say their timing is synchronized.

Even so, problems result if one soldier leads with the left foot while others are on the right. Or perhaps everyone is evenly spaced and perfectly aligned but for one misfit who 'tailgates' the soldier ahead of him and keeps stepping on his heels.

This is essentially why the *Genlock* tab provides several settings. The *Horizontal* and *Vertical Position* settings pin the image in the proper space in the frame, and in doing so could be likened to making sure each marching soldier is in position relative to his fellows (as viewed from above).

The *Phase* setting ensures proper color alignment, corresponding to making sure everyone is on the left or right foot at the same time.

Thus, the *Vert Position*, *Horiz Position* and *Phase* settings allow you to tweak synchronization to arrive at an optimum match between devices. (Typically, these settings are fine-tuned with the aid of downstream vectorscope and waveform monitors.) A discussion of these adjustments goes beyond the scope of this manual, but a quick online search for the keywords "genlock" and "adjust" turns up a number of excellent references.

REFERENCE TYPE

The 'bi-level' reference signal long used for standard definition television is often used for genlocking both SD and HD installations. However, if you are supplying an HD reference signal to the *Genlock* input (and your other equipment), select the *HD (Tri-level)* switch in the *Reference Type* area of the *Genlock* tab.

Note: Reference Type options do not appear for SD sessions.

CENTER FREQUENCY

Figure 78

This setting is applied when a Genlock reference signal is *not* in use. To adjust the setting, supply color bars to an input, pass that through to a video output, and then to a downstream vectorscope. The vectorscope display is completely stable when *Center Frequency* is properly adjusted.

FAILSAFE (4800 AND 440)

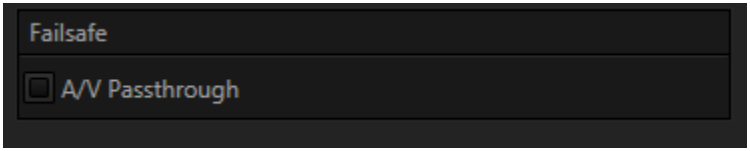


Figure 79

3Play's multi-tiered 'Always on Air' hardware and software failsafe systems (see Section 2.6.2) provide confidence that short of a complete power failure the show *will* go on.

In some settings, however, more elaborate hardware failsafe systems may be in use. Typically, such systems take over broadcast duties whenever the output signal fails. In this case or for other reasons, 3Play's failsafe video passthrough mechanism (which ensures that video output continues even in catastrophic circumstances) may be redundant, or even *prevent* the external system from engaging.

For this reason and others, the *Failsafe* section in *Output Configuration* has a switch that lets you to disable the A/V passthrough when necessary. By default, *A/V Passthrough* is off.

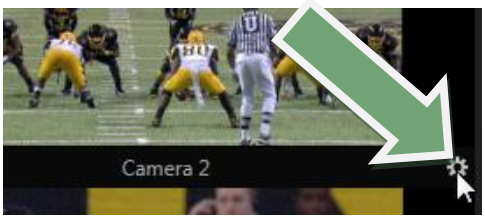
Tip: Only use fail-safe when a stable video source is connected to video Input 8.

7.1.4 MULTIVIEW

Multiview options and layouts are found in the *Workspaces* menu (located in the *Dashboard*). For best results, configure the *Multiview Output* to the native resolution of the external display (monitor or projector) connected to it. See Section 6.4.2 for details of the *Workspaces* menu.

Hint: Remember that Proc Amp settings are provided in the Workspace menu for all connected displays – see Section 6.4.2.

7.2 INPUT CONFIGURATION



The *Configure button* (gear) in the label area below each input monitor brightens when you roll the mouse pointer over it. Clicking it opens the *Configuration* panel for that source.

Figure 80

Alternatively, simply double-click an input monitor to open the corresponding *Input Configuration* panel. The upper portion of this panel is devoted to video-related settings, while the lower part holds audio controls.

7.2.1 INPUT SETTINGS

CONNECTION TYPE

The *Input Settings* tab in the *Input Configuration* panel features a *Connection Type* menu at the top.

The available source type options vary depending on the format for the session.

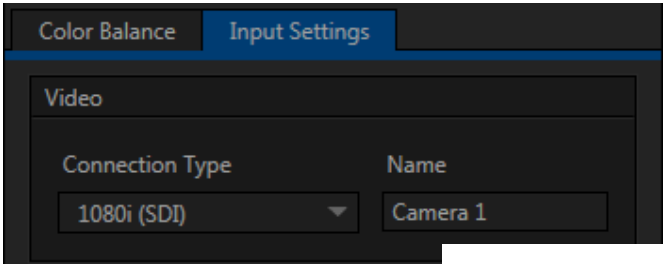


Figure 81

Multi-standard systems provide PAL and NTSC-J options according to session type, in addition to NTSC. The *Connection Type* menu for a PAL session lists suitable PAL HD and SD format options.

Choosing NTSC as the session video standard results in a *Connection Type* list with appropriate formats, and it is similar for NTSC-J. Changing from one video standard to another requires opening a new session.

Note: All connected cameras must conform to the video standard of the current session.

The standard options are:

1080i (Component)

- Analog source, high definition, interlaced
- 1080/60i or [1]1080/50i
- 1920x1080 pixels, 16:9 picture aspect
- Connected to 3Play by Y, Pr and Pb input connectors

1080i (SDI)

- Digital source, standard definition, interlaced
- 1080/60i or [1]1080/50i
- 1920x1080 pixels, 16:9 picture aspect
- Connected to 3Play by SDI input connectors
- Optionally carries embedded audio

1080/30p (SDI), 1080/30PsF (SDI), 1080/24p (SDI), 1080/24PsF (SDI), [1]1080/25p (SDI), [1]1080/25PsF (SDI)

- Digital source, high definition, progressive* scan (*PsF is a hybrid)
- 1920x1080 pixels, 16:9 picture aspect
- Connected to 3Play by SDI input connectors
- Optionally carries embedded audio

720/60p (Component), [1]720/50p (Component)

- Analog source, high definition, progressive scan
- 1280x720 pixels, 16:9 picture aspect
- Connected to 3Play by Y, Pr and Pb input connectors

720/60p (SDI), 720/30p (SDI), 720/24p (SDI), [1]720/50p (SDI), [1]720/25p (SDI)

- Digital source, high definition, progressive scan
- 1280x720 pixels, 16:9 picture aspect
- Connected to 3Play by SDI input connectors
- Optionally carries embedded audio

The standard definition options listed below are provided in both 4:3 and 16:9 versions:

480/30i (Component)

- NTSC analog format, standard definition, interlaced
- 720x480 pixels, 4:3 picture aspect or anamorphic 16:9 picture aspect
- Connected to 3Play by Y, Pr and Pb input connectors

480/30i (SDI)

- NTSC digital format , standard definition, interlaced
- 720x480 pixels, 4:3 picture aspect or anamorphic 16:9 picture aspect
- Connected to 3Play by SDI input connectors
- Optionally carries embedded audio

480/30i (Y/C)

- NTSC (S-Video) analog format , standard definition, interlaced
- 720x480 pixels, 4:3 picture aspect or anamorphic 16:9 picture aspect
- Connected to 3Play by Y and Pb input connectors

480/30i (Composite)

- NTSC analog format , standard definition, interlaced
- 720x480 pixels, 4:3 picture aspect or anamorphic 16:9 picture aspect
- Connected to 3Play by Y input connector

[1]576/25i (Component)

- PAL analog format, Standard definition, interlaced
- 720x576 pixels, 4:3 picture aspect or anamorphic 16:9 picture aspect
- Connected to 3Play by Y, Pr and Pb input connectors

[1]576/25i (SDI)

- PAL digital format , standard definition, interlaced
- 720x576 pixels, 4:3 picture aspect or anamorphic 16:9 picture aspect
- Connected to 3Play by SDI input connectors
- Optionally carries embedded audio

[1]576/25i (Y/C)

- PAL (S-Video) analog format , standard definition, interlaced
- 720x576 pixels, 4:3 picture aspect or anamorphic 16:9 picture aspect
- Connected to 3Play by Y and Pb input connectors

[1]576/25i (Composite)

- PAL analog format , standard definition, interlaced
- 720x576 pixels, 4:3 picture aspect or anamorphic 16:9 picture aspect
- Connected to 3Play by Y input connector

[1] Multi-standard systems only.

NAME

The *Name* field (next to *Connection Type*) is editable, allowing you to enter a custom name for each input. The name supplied will appear elsewhere in the user interface, including in the *HUD* (Heads-Up Display).

AUDIO SETTINGS

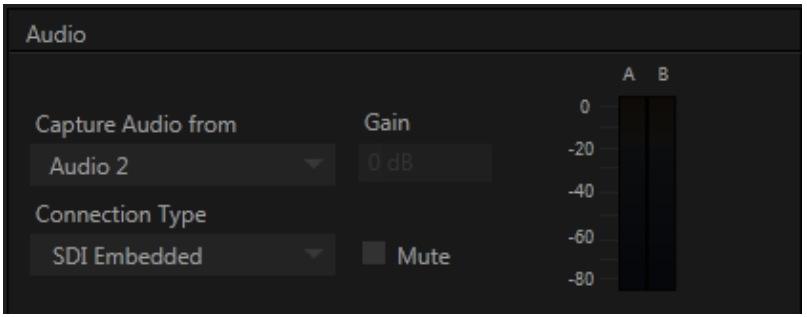


Figure 82

Section 3.10 detailed *Input Configuration* panel controls devoted to *Audio* setup.

Just to review briefly, the *Input Type* menu offers the following audio connection options:

- *Mic*
- *Mic + Phantom*
- *Line*
- *SDI Embedded* (shown only when the video connection is SDI).

The neighboring *Gain* slider adds a range of adjustment beyond the basic level established by the *Input Type* selection, permitting you to benchmark individual sources. The *Mute* switch, when enabled, prevents this particular audio source from being heard at all in captured files or on output.

Note: The Input Type menu for Input 7 is ghosted when the input is in use for timecode (LTC) input (see Section 7.3).

VU METERS

The audio *VU meters* (VU stands for Volume Unit) beside each video input monitor serve several purposes. At the simplest level, as you record audio with your video (or pass it through to output), the input meters assure you that audio is arriving at the audio inputs.

Likewise, the output *VU meters* provide confidence that you are supplying audio to the outputs. More importantly, you can monitor audio levels to be sure you are not overdriving the system, which would result in clipping of the signal.

7.2.2 COLOR BALANCE

AUTO COLOR

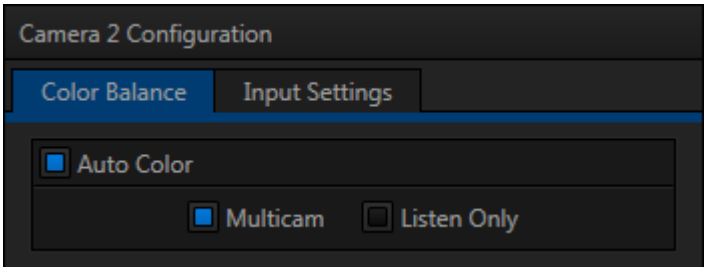


Figure 83

Lighting conditions can change dramatically during many live events, especially those held outdoors. Adding to this problem, production usually involves multiple cameras and, all too often, these may not have uniform color characteristics.

Ensuring consistent color when switching from one angle to another, avoiding unwelcome brightness or color shifts as evening falls or when a cloud obscures the sun briefly can be troublesome, and expensive.

To help you overcome these problems, 3Play's Input Configuration panel provides *Auto Color,* a unique feature capable of dynamically adapting the color characteristics of your video sources as lighting conditions vary. For many productions, simply enabling the *Auto Color* switch is all it takes to produce a show that looks amazingly consistent.

MULTICAM

By default, each camera with *Auto Color* enabled is processed uniquely – without reference to other sources. Often, though, even greater consistency can be achieved by treating sources in similar illumination environments as a group. Enable *Multicam* for several cameras causes *Auto Color* to evaluate and adjust these cameras in unison. You might, for example, enable *Multicam* for court-side cameras in an interior sports venue, while treating exterior or studio feeds individually.

LISTEN ONLY

The *Listen Only* switch allows you to include a source in the *Multicam* group without adding its own feed to the group evaluation. Thus a camera trained on Fenway Park's giant 'Green Monster' left-field wall can be automatically corrected without disproportionately biasing the group evaluation and consequent *Auto Color* correction. Alternatively, one might enable *Multicam* for a number of sources, turning *Listen Only* on for all but one camera – effectively making that camera the color reference all other cameras in the group will follow.

Note: The Proc Amps, discussed next, are downstream of the new Auto Color system. This allows you to can Proc Amps settings to apply further manual color adjustments to your individual sources, whether for fine tuning or to achieve a specific "look".

PROC AMP

Proc Amp adjustments can be toggled on and off using the *Proc Amp* switch at upper left, or reset by clicking the *Restore Defaults* button

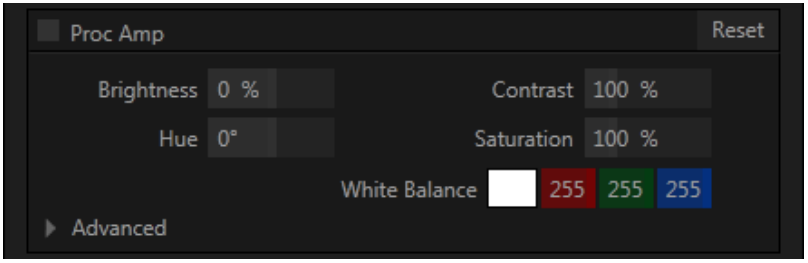


Figure 84

. Each *Proc Amp* has numeric slider controls for:

- *Brightness*: Adjustment range from -50 to +50 IRE (the default being 0). As reference, the full luminance range of a video signal can be thought of as '100 IRE units' (named for the Institute of Radio Engineers) – ignoring minor regional variations.

- *Contrast* – Adjustment range from 25 - 400% (default 100%).

- *Hue* – Adjustment range from -180° to +180°. Adjusts the master color of the video signal from the attached source, swinging the entire image through the color wheel's spectrum.
  Saturation – Adjustment range from 0-500%. Zero saturation results in a 'black and white' picture; increased saturation results in richer colors. High saturation values can exaggerate the color portion of the signal.

  (You should be aware that over-saturated colors are considered illegal for broadcast transmission, and may result in display problems on some devices.)

Note: Proc Amps are very useful. However, keep in mind that, whenever possible, it is best to perform color adjustments at the source or target device.

For example, it is preferable to calibrate a camera's colors at the camera, before sending the signal to the 3Play system. Doing so will yield higher color precision. Similarly, it's often better to adjust output color using controls on down-stream monitors. (The Display Proc Amps can never completely compensate for a badly calibrated monitor.)

The Proc Amps are especially useful for occasions when no external options are available. (Some cameras lack built-in color controls. At other times the physical placement of a device can make access inconvenient).

WHITE BALANCE

To automatically white balance a source, click and hold the mouse button over the *Color* (eyedropper) button, and then slide the pointer on the monitor for the corresponding source. Release the mouse button over a part of the image that should be white.

ADVANCED COLOR GROUP

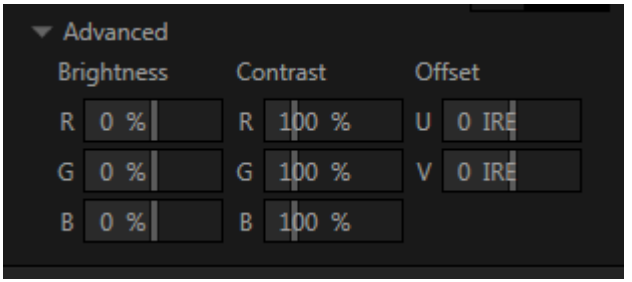


Figure 85

Expand the *Advanced* control group to access more elaborate color controls for individual color channels.

7.3 ROUTER CONFIGURATION

3Play supports countless popular video router systems, including those from Utah Scientific®, Miranda®, Blackmagic Design®, Grass Valley®, AJA® and Ensemble Designs®.

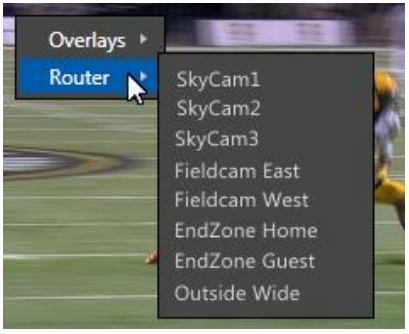


Figure 86

The implementation offers a number of configuration options. A basic setup would be as follows:

- Connect the router to 3Play by Ethernet cable, and then connect one (or more) of the router's video outputs to 3Play inputs with matching numbers, using suitable video cables.

(For example, by default router output number 3 would be connected to *Input 3* for control communication between the devices to be properly linked.)

- Click the *Shutdown* icon on 3Play's *Home page* (Startup), and click *Exit to Windows.*
- Navigate to the C:\3Play\Configuration folder, and open the file named *router_setup.xml* by double-clicking it (it will launch in *Notepad*).

This file is where you add routers you wish to be controlled by 3Play. Individual routers are each identified by an entry inserted between the starting and closing "config" tags, as explained in the file comments.

A typical entry might be as follows:

<grassvalley ip="10.28.1.128" port="12345" name="AJA KUMO"/>

- Save the file after editing, and re-launch 3Play.

Note: 3Play communicates with each using individual IP address and port numbers, allowing multiple routers to be connected simultaneously. Several systems can even control either the same router(s). File comments explain how you can bypass the default 1:1 mapping of router outputs to 3Play inputs when required, along with other extended configuration options.

7.4 TIMECODE CONFIGURATION

NewTek 3Play can supply timecode from its internal system clock, or can refer to an external *LTC* (Linear Timecode) source supplied to 3Play inputs (see Section 3.4.3). This timecode is embedded in video files captured during the session. A *Configuration button* (gear) beside the *Timecode* display in the *Replay Desktop Dashboard* opens the *Timecode Configuration* panel.

7.4.1 PRODUCTION TIME DISPLAY

The control group labeled *Production Time Display* allows you to enter time values that are specific to the current event. When the *Start* switch is lit, the time you set in the numeric field at right is used to supply the *Production Start* time display in *Multiview* screen layouts that include clocks).

This provides a convenient warning as the time for your event nears. In similar fashion, enabling the *End* switch and entering an appropriate time displays a countdown to the end of the event (shown once the *Start t*ime is surpassed) when clocks are displayed on *Multiview*.

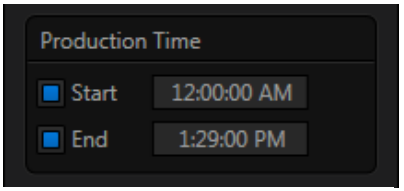


Figure 87

Tip: You can modify these time values by clicking on them and typing, or by dragging the mouse point left or right over them. Conveniently, you can ignore timecode punctuation when entering numbers if you like: simply type the key digits using 24 hour notation. (For example, to set the time to 5:00.00 AM, press "5", and then Enter. Or to set the time to 3:30 PM, type "1530" and press Enter.)

7.4.2 TIME

The *Timecode* control group menu allows you to select between timecode sources as follows:

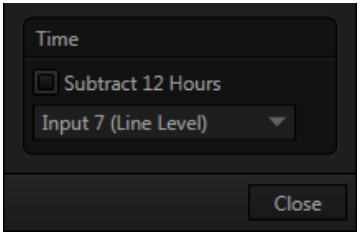


Figure 88 – 3Play 4800

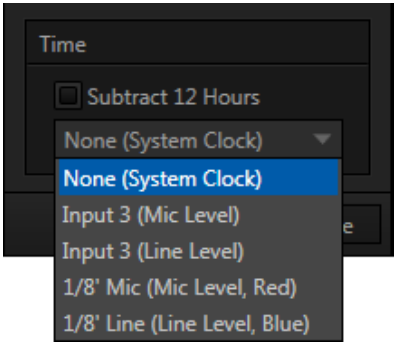


Figure 89 - 3Play 440

3Play 4800

- *None (System Clock)*
- *Input 7 (Mic Level)*
- *Input 7 (Line Level)*

3Play 440

- *None (System Clock)*
- *Input 3 (Mic Level)*
- *Input 3 (Line Level)*
- *1/8" Mic (Mic Level, Red)*
- *1/8" Line (Line Level, Blue)*

Tip: If the LTC source fails, the system automatically reverts to Internal (System Clock) after a moment or two (an error flash message is displayed in the Status Bar – see Section 6.4.1).

Another switch in the *Time* group allows you to optionally *Subtract 12 Hours* from the actual timecode. In turn, this permits you to avoid confusion that might arise later when sequencing files based on timecode that 'wraps around' past midnight. (Otherwise, for example, a video frame recorded one minute *before* midnight would be assigned the timecode 23:59:59.00, while frames recorded one minute or more later would have timecode ≥ 01:00:00.00 – seemingly a *lower,* i.e., *earlier,* timecode value.)

Note: The 3Play system assumes the external LTC signal matches session frame rate and timecode format. For example, NTSC 29.97 and 59.97 sessions result in drop-frame timecode internally (all others are NDF). Similarly, in a 24fps session LTC is treated as 24fps.

8 THE CONTROL SURFACE

During operation, your principal contact with the NewTek 3Play™ system will normally be though the use of the Control Surface. Using its buttons and other controls, you can perform the great majority of necessary functions.

This chapter describes the features of the Control Surface. Further references to the Control Surface are made in context In subsequent chapters, as well.

The NewTek 3Play™ Control Surface is purpose-designed to provide responsive and comfortable control over all commonly used production functions of the system, without unnecessary complexity. Its apparent simplicity is no accident, and makes using your NewTek 3Play straight forward, powerful, and trouble free.

In the sections that follow, we'll review the controls in each group on the *Control Surface*. First, we should familiarize ourselves with an important concept related to 3Play's two primary *output channels*, designated *A* and *B*.

3Play Mini features a virtual Control Surface – see Appendix A, 3Play Mini Virtual Control Surface

8.1 DUAL CHANNEL REPLAY

In many ways, it would not be incorrect to think of your NewTek 3Play system as not just one, but two conjoined 'playout' devices. The system features two fully independent audio/video busses and outputs, referred to as *Channel A* and *Channel B*.

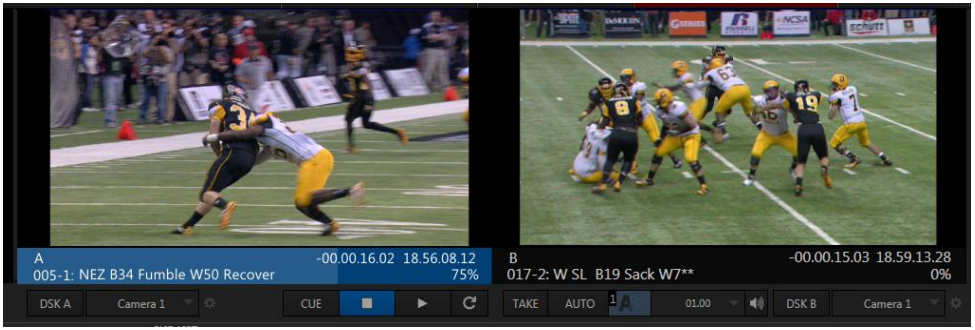


Figure 90

Each output channel can function completely independently of the other; either can be directed at any time to transmit any available audio/video source, whether live or recorded.

Physically, these two channels are individually supplied to connectors on the system's backplate for output to downstream devices. These comprise *Output 1* (3Play's *Channel A output*) and *2* (*Channel B*). During live production, both are represented on the *Replay Desktop* by individual output monitors (Figure 90).

Tip: A third, special output is called Aux (for "Auxiliary"), and is carried on Output 3 – more about Aux later.

8.1.1 CHANNEL DELEGATES

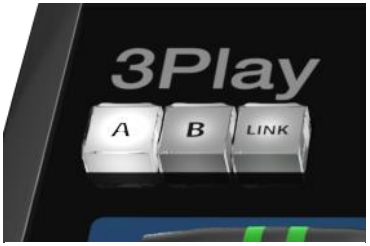


Figure 91

Transport (*PLAY*, *STOP*, etc.) and many other similar operations normally affect just one channel. That selection is determined by the active *Channel Delegate* button on the *Control Surface*.

As you would expect, pushing the *Control Surface* button labeled *A* directs operations to *Channel A*; Likewise, pushing *B* assigns control operations to *Channel B*.

Only one *Channel Delegate* can be selected at a time, and all operations and input are directed to that channel and its source (certain controls *can* affect both channels when *LINK* mode is on – see Section 8.4.1).

Figure 92

Tip: You can also choose the currently delegated channel by clicking the mouse in The Channel Info area beneath the output monitor for Channel A or b.

The active *Channel Delegate* determines the following matters:

- What is shown in the *CLIP* and *PLAY LIST* panes on the *Replay Desktop*
- This includes the selections shown in the *CLIP* and *PLAY LIST tabs*
- The state of various *Control Surface* and user interface buttons and settings.

All of these attributes are stored independently for the two *Channel Delegates*. Switching from one *Channel Delegate* to the other updates the *Replay Desktop* display when appropriate.

The color in the Channel Info area indicates the source type sent to the channel: blue for the CLIP LIST, gold for PLAY LIST, and green for Live (or Delayed sources.)

It also shows which channel is delegated; normally, only the delegated channel displays a colored background.

A thin white border marks the delegated channel in Link mode (since both panes are colored - Figure 91).

Note: Conveniently, supplementary a/v output sections labeled AUX (Auxiliary) automatically updates to show the display for your current Channel Delegate – A or B.

8.2 TRANSITIONS (TAKE | AUTO)

3Play's powerful effects engine provides high end transitions (including powerful *Animation Store* effects, with embedded overlays and sound) in several ways to suit varied requirements.

Figure 93

You can even create your own custom *Animation Store* transitions using the included *Animation Store Creator* add-on application. These capabilities are so powerful that an entire chapter is devoted to them (see Chapter 14). For now, we'll just mention that the Control Surface's *Take* and *Auto* buttons work just like their familiar namesakes on a typical video switcher, permitting a 'direct to display' program/preview workflow in which *Channel B* supplies program output, with *Channel A* serving as the preview bus.

Let's consider 3Play's *Source Delegates next.*

8.3 SOURCE DELEGATES

We've seen how the active *Channel Delegate* determines which output channel is controlled, but we've yet to choose a specific audio/video source send to the channel (and control). That's where the *Source Delegate* comes into play.

Your NewTek 3Play can deliver audio/video output from one of three possible sources:

- *CLIP LIST* – the currently selected clip (angle) in the *CLIP LIST*
- *PLAY LIST* – output from the *PLAY LIST*
- *Live* – the live (or *Delayed*) signal from one of the system inputs

As mentioned, 3Play's dual channel design means that, at a given time, a/v data from one of the three sources above is always assigned to *Channel A,* while *Channel B* could be carrying something else entirely. Changing the source for the currently delegate channel simply requires pushing one of the *Source Delegate* buttons.

Figure 94

Naturally only one *Source Delegate* can be active for a given channel at any time. Note that your *Source Delegate* selection determines not only the source on the delegated channel, but also the source other controls affect – whether *LIVE* (video from an input), the *CLIPS LIST* or *PLAY LIST*.

Tip: Another way to change the Source Delegate is to click the mouse in the CLIP LIST, PLAY LIST. However, if you do this when video is playing on output, the Source Delegate does not update. (This is by design, and allows you to enter comments or perform other management tasks without interrupting play if you wish.)

8.3.1 CLIP LIST

While the *CLIP LIST* is delegated, *Control Surface* (along with corresponding keyboard and *Desktop* transport control) operations are directed to the *CLIP LIST*.

A gold outline around the *CLIP LIST* confirms selection, and the item currently selected in the *CLIP LIST* is automatically displayed on the delegated output (*A* or *B*).

8.3.2 PLAY LIST

While the *PLAY LIST* delegate button is active, *Control Surface* (along with corresponding keyboard and *Desktop* transport control) operations are directed to the *PLAY LIST*. A blue border around the *PLAY LIST* module signifies its delegated status and, again, the current selection is automatically displayed on the delegated channel.

8.3.3 LIVE

Finally, while *LIVE* is delegated, as you would expect, you control a live source from the system inputs, and it appears on the delegated channel (*A* or *B*).

In *LIVE* playback mode, transport operations (such as *STOP, Jog* or playback speed adjustments) can only be performed when *Record* is enabled. (In such cases, output is actually no longer *live*, but *Delayed.* In this case, no *Source Delegate* button is highlighted.)

Tip: When LIVE is delegated, select specific inputs by pressing number pad buttons on the Control Surface while holding down the ANGLE button, or by using ANGLE + ◂ and ▸ buttons.

8.4 INDEPENDENT STATES

3Play stores the *Control* and *Output Delegate* states for *Channel A* and *B* independently, along with other important parameters – including the current *CLIP LIST* or *PLAY LIST* selection state, playhead position, and so on.

Figure 95

Consider an example:

- *Channel A* may be delegated to *Clips*, and playing a certain clip from the *CLIP LIST*
- Meanwhile, *Channel B* might display the same clip in slow motion, or something else altogether – really any source, in any state of play.

When you newly select a *Channel Delegate* (*A* or *B*), the *Replay Desktop* display is refreshed to show the current state for that channel if it is appropriate to do so. This brings us back to the *Link button*. You may wonder what effect different controls will have in this special 'tandem mode', and what will be displayed on the *Replay Desktop* when it's in use.

8.4.1 LINK

Enabling *LINK* does not alter the current *Channel Delegate.* Rather, the *LINK* button toggles a special 'lock-step' mode.

In broad terms, *Link* mode causes transport control operations (*Play*, *Stop*, etc.) to occur in tandem. Other operations – such as changing clip selections – are not linked.

For example, when *A* is lit along with *LINK* on the Control Surface or *Replay Desktop*:

- The *Replay Desktop* displays *Channel A's* operational state.
- Pressing *Stop* or *Play* affects playback for *CLIP LIST* or *PLAY LIST* sources on both channels simultaneously.
- Selecting a different clip (or *CLIP LIST /PLAY LIST* page*)* affects the delegated channel only (in this example, *A).*

Tip: The LINK button is behaves like the Caps Lock key on your keyboard, remaining active until you press it again.

Figure 96

Just to repeat it in this context, the *Channel Info* pane under the currently delegated channel output monitor is normally shaded to what source is assigned to it. When *LINK* is enabled, *both* panes are shaded, but a white border (Figure 96) is added to denote the delegated channel.

8.5 RECORD

Figure 97

The *REC* (Record) button *activates* capture of a/v data to file(s) on assigned storage volumes on or off. (The specific sources that are recorded are configured in *Startup* when creating the session; see Section 10.1, and also 10.3.1).

Note that simply pushing REC again does not disable recording. To prevent accidental interruptions in capture of important events, you must hold down SHIFT before pressing REC when you wish to stop recording.

Tip: As a helpful reminder, a special 'record event' row is added to the CLIP LIST whenever newly you enable 3Play recording.

8.6 TRANSPORT

Let's circumvent the *Play Speed* control group momentarily in favor of more fundamental playback controls. The familiar VCR-style controls in the *Transport* group provide easy to use transport through your media.

Figure 98

8.6.1 PREVIOUS

|◀ Whenever the playhead is more than three seconds into a clip, pressing the first button in this row takes you to the clip's In point. Otherwise, it selects the previous clip in the *CLIP LIST* or *PLAY LIST* (if playback is underway, it will resume play from this point).

Hint: When play is stopped, press SHIFT with PREVIOUS to jump to the first frame of a clip.

8.6.2 STOP

■ Press the *STOP* button to end playback (when it is underway). Press *STOP* again to jump to the first frame of the current clip (or double-press *Stop* during play to do this).

Tip: With the PLAY LIST delegated, pressing STOP a third time jumps the 'playhead' to the In Point of the first clip in the current playlist.

8.6.3 PLAY

▶ Pushing *PLAY* initiates playback of the currently selected source – whether a clip in the *CLIP LIST* or *PLAY LIST*, or a *Delayed* video source. Pressing *PLAY* when a clip has stopped its last frame replays it from the beginning. When a *newly delegated* source is at 0% speed – whether due to pressing *STOP* or T-Bar use – the initial T-bar position is ignored when you push *PLAY*; *playback* is initiated at 100%.

Tip: For Live video sources, all transport control operations are invalid when REC (Record) is disabled, and will have no effect.

LOOP

Note that you can press SHIFT + ▶ (*Play*) to toggle the playback *Loop* setting (the loop control in the playback control group beneath the monitor for output *B lights to* shows when loop is enabled).

8.6.4 NEXT

▶**|** The *Next* button makes its appearance at the opposite end of the same row in the *Transport Control* group. Pressing *Next* takes you to the next clip in the *CLIP LIST* or *PLAY LIST*. If playback is underway, it will continue from this point.

Hint: When play is stopped, press SHIFT with NEXT to jump to the last frame of a clip.

8.6.5 FAST JOG

The *FAST JOG* button is a toggle. Press it to turn the feature on, and press it again to disable it. When enabled, the transport effect of the *Jog Wheel* (discussed next) is multiplied eight times so that you can traverse the frames in your media more quickly.

8.6.6 JOG WHEEL

Rotate the *Jog Wheel* to navigate back and forth through the frames of the current a/v selection.

Tip: Inside Media Browser, you can scroll through the File Pane using the Jog Wheel.

Normally, *Jog* will stop when you reach the *In* or *Out* point for the current clip. To continue to scan outside these boundaries, hold down *SHIFT* while jogging.

8.7 PLAY SPEED (T-BAR SECTION)

This group contains just two controls, an illuminated *T-Bar*, and a button labeled *+/-*. Adjustments to *T-Bar* position progressively modify playback speed, and can also automatically engage playback when not already in progress.

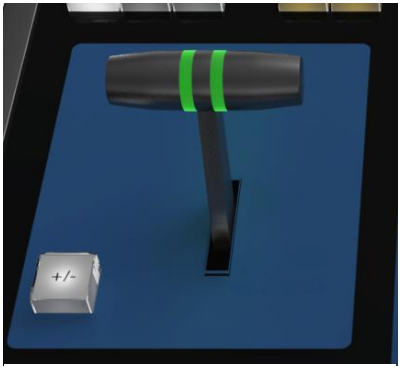


Figure 99

Since, at a given moment, *Channel A* and *B* may well be set to different playback speeds, the *T-Bar* position may not initially reflect the correct speed when you change which channel is delegated.

In this case, the speed applied updates as soon as you move the *T-Bar* to (or through) the current speed. (When a *newly delegated* source is at 0% speed – whether due to pressing *STOP* or T-Bar use – the initial T-bar position is ignored when you push *PLAY* and playback commences at 100% speed.)

In normal operating mode, the maximum *T-Bar* position corresponds to 100% playback speed, with 0% at the opposite extreme of the lever's travel. Pressing *+/-* engages a special *T-Bar* mode

to extend the *T-Bar's* range. In this mode, the top and bottom of the lever stroke represent +200% and -200% respectively, with 0% (playback stopped) in the middle.

8.7.1 ILLUMINATION

The T-Bar lighting serves two purposes. The light color denotes the delegated source it is controlling at any moment – green for LIVE, blue for the CLIP LIST, and gold for the PLAY LIST. Normally, the light is brightest at the top of the T-Bar's stroke, representing 100% playback speed. At the opposite extreme of T-Bar travel, the light is noticeably dimmed. In +/- operating mode, the light is dimmed at the mid-point, representing 0% speed (playback stopped).

8.8 LIST SELECTION TOOLS

Figure 100

This group contains 6 navigation buttons that variously permit you to change the selection in the *CLIPS LIST* or *PLAY LIST* – whichever is delegated at the moment. If *LIVE* is delegated, the button action is directed to the last list accessed.

Note that changing *selection* during playback does *not* update what is shown on output. (This allows you to perform various clip management operations without interrupting your outgoing program streams.)

Tip: The ◂ and ▸ buttons are somewhat similar to the Previous and Next buttons (see Section 8.6), but only affect selection. They never change what is output during playback. Also, they allow navigation into numeric fields (Previous and Next do not).

The two TAB buttons allow you to move forward or back between the different tabbed panes in your *CLIP LIST* or *PLAY List*.

Note: See also Section 8.11, ANGLE.

8.9 SHIFT

SHIFT is a 'qualifier' button, and works much like its keyboard equivalent. When held down while performing another *Control Surface* operation, it modifies the outcome. Typically *SHIFT* is used

to support multi-selection, as when used with the ◂ and ▸ buttons. (It also has a special function when used with the ANGLE button – see Section 8.11.)

8.10 SET | IN/OUT

Marking events is, of course, the core business of NewTek 3Play. These two simple buttons will see a lot of use. Their roles are not complicated, but it would be good to review them anyway.

Figure 101

Note: Of course, marking events would be pointless without recording, so pressing either IN or OUT automatically enables Record when necessary.

8.10.1 SET | IN

Pressing the *IN* button adds a new event (row) to the *CLIP LIST***.** The current timecode supplies the *In Point* for the event.

SHIFT + IN

Holding down *SHIFT* while pressing *IN* performs the 'shifted' button operation, which is *SET* – as the button label suggests. This updates the *In Point* for the selected event in the *CLIP LIST*, or, when the *PLAY LIST* is displayed, the current clip.

Tip: Use SHIFT + Jog to move into areas before or after the current clip boundaries.

8.10.2 SET | OUT

Naturally, if you have pressed the *IN* button to create a new event, setting an *In Point*, you realize that you can complete this operation by pressing the *OUT* button. In this case you set the event's *Out Point* to the current timecode value, and as a natural consequence, establish the *Duration* for the event.

Tip: If for some reason you choose to end recording when an event is incompletely marked – i.e., OUT was not pressed – an Out Point is supplied automatically.

ONE BUTTON MARKING

You can also add new events to the *CLIP LIST* without ever pressing *MARK IN*. If no *In Point* has been set (by pressing *IN*), pressing the *OUT* button will:

I. Create a new event.
II. Automatically assign both an *In Point* and an *Out Point* to it.

By default, the *In Point* for this event is set four seconds before the time when you pressed *OUT*. *One button marking* thus permits you to easily create a series of events just by pressing the *OUT* button only when you observe noteworthy occurrences.

Tip: The default duration for these events can be set to a custom value using One Button Marking menu options found in the Options menu (see Section 6.4.2).

SHIFT + OUT

Again, just as for the *IN* button, press *SHIFT* in conjunction with *OUT* to update the *Out Point* for the current *CLIP LIST* event or *PLAY LIST* clip, using the timecode from the currently displayed frame.

8.11 ANGLE

Figure 102

- In the CLIP LIST, you can use the ◂ and ▸ navigation buttons to change cameras.
- In *either* list, you can hold down the *ANGLE* button and press the camera number you want to switch to on the *Control Surface* number pad. (For the *PLAY LIST*, this actually updates the current item's source clip.

Tip: Changing angles this way does not normally move the playhead to the clip's In point. This allows for quick review of different viewpoints a specific moment in time. If you do wish to jump to the In Point of the clip at the same time - hold down SHIFT along with ANGLE when pushing the number pad digit.

The ANGLE button thus also lets you revise the angle for a clip you have added to the PLAY LIST.

8.12 BOOK MARK

Bookmarks are timecode references that are independent of marked *In* or *Out* points you may set for events. This is a very useful feature, enabling you to quickly skip through your recorded video to specific points.

Figure 103

A bookmark is set at the current timecode every time you press the *BOOK MARK* button (as long as recording is underway).

The maximum number of bookmarks never exceeds ten, so once the limit is reached, pressing *BOOK MARK* again erases the 'oldest' bookmark and sets a new one.

Tip: Bookmarks reference the current (i.e., 'live') timecode when they are set. If recording is not underway, pressing the BOOK MARK button has no effect.

Press *SHIFT + BOOK MARK* to jump the playhead back to the most nearest prior bookmark. Doing so enough times will eventually 'wrap around' to the most recently set bookmark, and then work backwards through them again.

8.13 UTILITY BUTTONS

A four-button group located at upper right provides a number of important media management functions, as described next.

Tip: All of these functions operate on the current selection (clip or event) in the delegated list (i.e., the Clip or PLAY LIST). Generally they have no effect in Live or Delayed play modes.

Figure 104

8.13.1 CUT/COPY AND PASTE

These familiar functions can be used to arrange and manage the entries in your *CLIP* and *PLAY LISTs* tabs. Use *SHIFT* with the *COPY/CUT* button to apply the *CUT* feature. *PASTE* insertions generally occur below the current selection, and the insertion will receive a new *Clip ID*.

Note: The Control Surface CUT/COPY/PASTE features operate on clips and events in the list panes. Similar operations in the dataview depend on standard keyboard shortcuts or context menu functions.

8.13.2 PUBLISH

This button sends selected items to the *Publish Queue* (discussed in Chapter 15), from whence it can be further distributed to various destinations, including online streaming and social media sites, as well as local or ftp storage targets.

Tip: Media added to the Publish Queue may be processed as a batch at a later convenient time, or immediately, according to the independent Auto Upload settings for clips or sill images – located under the Set Publish Destinations label in the Replay Desktop's File menu.

8.13.3 ADD TO PLAY LIST

Push *Add to PLAYLIST* to insert the currently selected clips from the CLIP LIST to the current *PLAY LIST* page. (The operation only proceeds if the *Source Delegate* is set to *Clips* when the button is pressed.)

8.14 TAG, GO TO AND SEARCH

Figure 105

The 3Play functions provided by all three buttons in this group are detailed more completely in Chapter 13, TAGS, SEARCH, & More.

Just as a brief introduction, then, when the *TAG* button is lit, CS number pad input is automatically converted to matching text entries in the cells (and tabs) of the TAGS pane located at the bottom of the *Replay Desktop*. Otherwise, literal numbers are entered.

The *GO TO* button has several functions. As follows:

- Entering an appropriate number and pressing *GO TO* takes you to the event row with the matching ID number in the *CLIP LIST*.
- Selecting a clip in the *Search Results* tab of the *CLIP LIST* and pushing *GO TO* jumps to the tab where that clip is actually located.
- The first digit for *GO TO* operations is treated as the tab number (superfluous leading zeros are ignored). This means that if you have 10 or less *CLIP LIST* tabs, entering a single digit and pressing GO TO jumps to the corresponding *CLIP LIST* tab.
- If *SHIFT* is pressed with *GO TO,* a 'go to timecode' operation is performed.

The *SEARCH* button performs a search of all *CLIP LIST* tabs for entries that match the criteria entered, and places the matching events in the *Search Results* tab.

8.15 THE NUMBER PAD

Not surprisingly, the number pad allows you to type literal numbers into the *dataview* window, which may be added to clip *Memo* fields, used for searching, etc. Less obvious, perhaps, the number pad is also a dream come true for working with 3Play's *TAGS* system.

For quickly populating *Memo* fields for your marked events using tags, or locating clips using tags, *ID* or timecode values, the number pad will almost certainly become your preferred input mechanism (detailed discussion of all aspects of this matter can be found in in Chapter 13, TAGS, SEARCH, & More).

Also handy to know, in a Program-Preview workflow (Section 14.2), you can select a specific transition (from among the nine currently listed in the *Transition Palette,* Figure 158) by holding down *SHIFT* on the *Control Surface* and pressing a number between *1* and *9* on the number pad.

8.15.1 ESC & ENTER

Pressing the *Esc* (Escape) button cancels a popup dialog, or exits from text input without applying changes.

Figure 106

As you'd expect, pushing *ENTER* confirms or executes the current operation. When editing *Memo* cells, pushing *ENTER* updates the cell using the current content of the *dataview*.

Tip: Hold down SHIFT when pressing ENTER to cause all Memo cells for the current event row to take on the same value.

9 MONITORING

The word “monitor” comes from the Latin “monēre”, meaning ‘to warn’. The word has taken on additional meaning since Roman times.

As a verb, “to monitor” entails ‘keeping an eye’ on something, and ‘checking continually’, as when monitoring a process. As a noun, we understand it to mean devices that permit one to do just that. 3Play’s ample monitoring features are described in this chapter.

Fittingly, NewTek 3Play provides monitoring features that are just what you need to prepare and control video replays in your productions.

Note: A number of important controls and features are located in the monitoring section for convenience. Among others, these include the Source Connection Type, Proc Amp, Genlock, and Audio controls. To give these features their due, they were treated individually in Chapter 7, which is entitled I/O Configuration. Likewise, transitions, text, tags and search tools are dealt with elsewhere in this guide.

9.1 OVERLAY OPTIONS

Not to be confused with DSKs (which allow you to overlay imagery system program output; see Chapter 15) 3Play viewports have various overlay options which are provided for operator reference purposes.

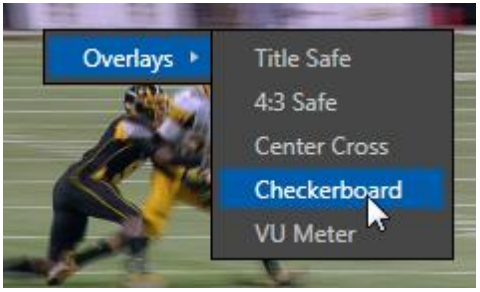


Figure 107

Figure 108

Of these, perhaps only the *Checkerboard* option requires comment:

Certain source types for *DSK* overlays support embedded transparency. For example, a team logo file in 32bit PNG format will allow the video it is applied over to appear behind transparent regions of the image.

9.2 INPUT MONITORS

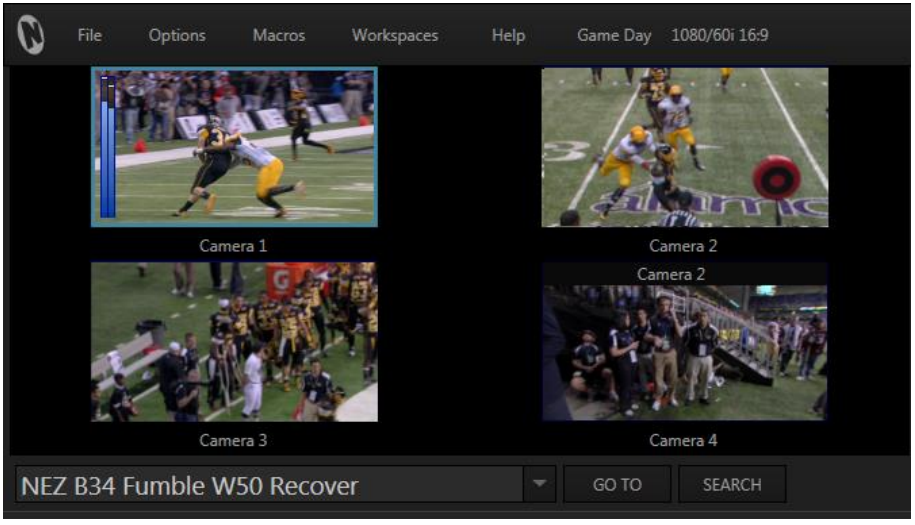


Figure 109

Live input monitors for all sources configured for recording in the session are shown at left near the top of the screen. These previews are often referred to as ISO, or Isolation monitors.

Tip: Depending on your choice when creating the session, you may see either four or eight input monitors.

When a source is selected as the live source for *Channel B*, it monitor viewport displays a thin green border. If a green border is shown, the source is live on Channel A.

9.2.1 TITLEBAR FEATURES

Several other important features are associated with each *Input Monitor*.

When you move your mouse pointer over an *Input Monitor*, the *Configure button* (gear) appears at right in the label beneath.

Click this icon to open the *Input Configuration* panel for that source (see Section 7.2).

Among other things, you can supply a new name for the input in this panel, and it also holds *Proc Amp* and *Audio* settings.

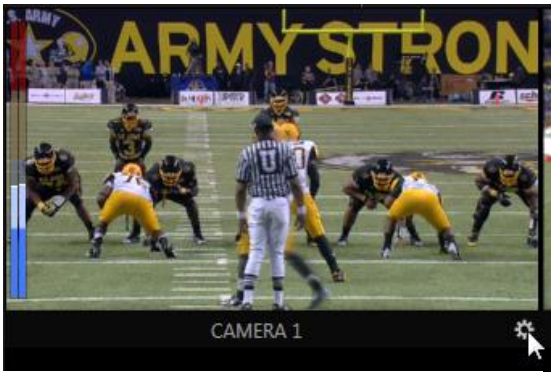


Figure 110

Tip: Drag the horizontal divider between the monitoring pane and CLIP LIST pane beneath to re-size the monitors. You can even completely hide the monitor pane if you wish to use a suitable Multiview layout or external monitoring solution instead. To return the monitor pane to its default location, double click the divider bar. A similar adjustable divider separates the output monitors from the input viewports.

Input monitors also provide handy audio *VU meters* (Figure 110). These are useful when initially adjusting levels, as well as to ensure that excessive audio levels during production don't cause clipping in captured files. Right-click a monitor to toggle the VU overlay on or off, and to see the other overlay options provided.

9.3 CHANNEL MONITORS (A, B)

Figure 111

NewTek 3Play supports two fully independent video and audio output sections, referred to as *Channel A* and *Channel B*. The corresponding output monitors could hardly be more important, since, they show what you are currently sending to downstream devices and viewers.

When you roll the mouse over a monitor, a *Configure button* (gear) button appears at right in the *Channel Info* area below. Clicking this button opens a tabbed panel titled *Output Configuration*, providing controls and options for *Outputs A* and *B*, *Aux* (Auxiliary output, 3Play 4800 only) and *Genlock &Failsafe* – see Chapter 7 for details on all of these options.

Tip: Double-clicking a monitor will also open its configuration panel.

When the *A* or *B* delegate button is lit on the *Control Surface*, your actions determine which source is assigned to the corresponding output. For example, if *A* is delegated and showing a live source, clicking a clip's *Memo* field send that clip to *Channel A*.

Tip: When play is stopped, clicking a clip in the CLIP LIST or PLAY LIST has two consequences – first, the clip is shown on the current output, and second, the Source Delegate is set to Clips or PLAY LIST respectively.

Similarly, pressing the *LIVE*, *CLIPS*, or *PLAY LIST* button on the CS sends the currently selected item from the corresponding source to the currently delegated channel.

9.3.1 CHANNEL INFO

Figure 112

The *Channel Info* area below each output monitor provides a wealth of useful information about the video stream currently assigned to the channel. It may include any of the following:

- *Name* – the output channel name, as set in *Output Configuration* (see Section 7.1.1).

Delegated channel – Normally, only one channel (the one delegated on the CS) displays a colored background behind its *Channel Info* area. This identifies the channel being controlled at the moment. A broad progress bar shown on the background marks the playhead position in clips.

In *LINK* mode, both *Channel Info* backgrounds are colored, so a white border marks the delegated channel.

Tip: The specific background color indicates the source supplying the delegated channel, blue for the CLIP LIST, gold for PLAY LIST, and green for LIVE (or Delayed) sources). See Section 8.3 for more on Source Delegates.

- *CLIP LIST* or *PLAY LIST* details: *CLIP* mode – *Clip ID and Memo*
- Time display:

  a) *LIVE* or *DELAYED* play:
     - *Timecode* at the current frame
     - *Behind Live* time (*Delayed* mode only)

  b) *CLIPS* mode (*Clips* button on *Control Surface* is pressed):
     - Countdown to (or time past) clip *Out Point*
     - (Recorded) Timecode at current frame

  c) *PLAY LIST* mode (*PLAY LIST* button on *Control Surface* is pressed):
     - Stopped: Countdown to clip *Out Point*
     - Playing: Countdown to *PLAY LIST* end.
     - (Recorded) Timecode at current frame

- *Speed*: Shows the T-bar position during play, as a percentage.

Tip: You can also choose the currently delegated channel by clicking the mouse in the Channel Info area.

10 RECORDING AND STORAGE

Recording audio and video from its inputs for review, instant replay or other purposes is the core function of your NewTek 3Play™ system. This section provides helpful information about recording and storage volumes, as well as explaining how recording is enabled and disabled.

Live, or previously recorded audio/video data, can be sent to 3Play's outputs when *Record* is off, but (like *Bookmarks*) event marking depends on recording being enabled.

10.1 RECORD CONFIGURATION

The first step toward recording is deciding which live inputs will be captured, and on which hard drives the data from various inputs will be stored.

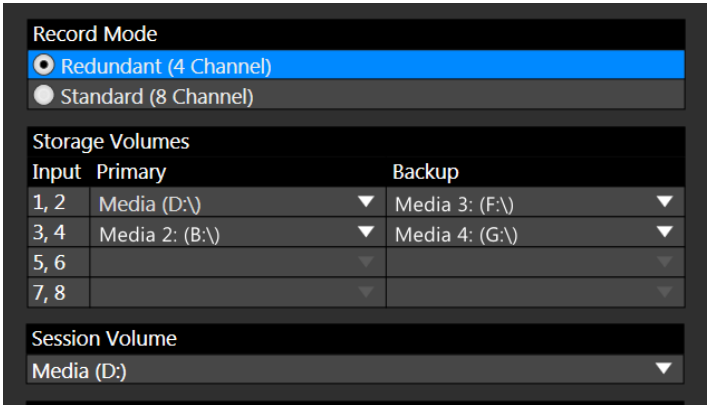


Figure 113 – 3Play 4800 shown

These important decisions are made in the *Startup Screen* at the time of first creating a new session. We detailed all of the important aspects of session configuration back in Section 5.2.1.

Note: The Record Configuration options you choose are retained with the session, and cannot be altered after launching it. To work with a different Record Configuration, create a new session.

10.2 STORAGE VOLUMES

The *Record Configuration* options controls (Figure 113) list storage volumes that are currently mounted on the system and available for capture purposes. The list may include suitable external drives along with those inserted in the 3Play system's removable drive bay(s), and also network-attached storage devices and volumes.

Tip: Typical networks and network-attached storage volumes are too slow to be useful for recording purposes. For this reason, they are never automatically assigned to recording duty when creating a new session. However, you can manually select them when you are confident your devices are sufficiently large and fast to serve capably. See additional notes in Section 5.2.1.

Drives that are clearly too small (or too full to accommodate further capture) are not shown. Note that drives *may* be shown that are unsuited for capture purposes because of low transfer or disk speed, or perhaps for other reasons. It is up to you when configuring external drives to ensure that the drive (and the connection method it relies on) is suitable for capture.

Note: Simply configuring inputs for capture in the Startup Screen does not engage recording. Recording is active only when the Record button on the Replay Desktop is lit.

10.3 RECORDING AND THE DESKTOP

It's worth noting that you aren't actually required to record *all* active video inputs. Sometimes, you may wish to supply an input with video for some reference purpose that does not call for it to be captured.

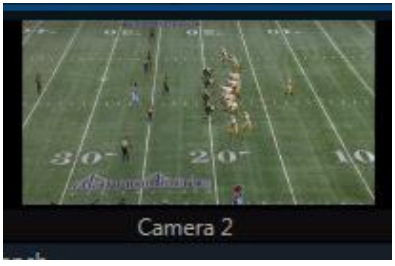


Figure 114

The *Input Monitors* tabs on the *Replay Desktop* (and *Multiview*) show connected sources, whether they are configured for capture or not.

This may raise a question in your mind, though: If your setup includes some sources that are not recorded, how can you distinguish between these ones and sources that are captured? One way to tell which inputs are configured for recording is to observe the *CLIP LIST* monitors (enabled in the *Options* menu). Inputs that are simply being passed through without being recorded appear empty.

10.3.1 RECORD ON/OFF

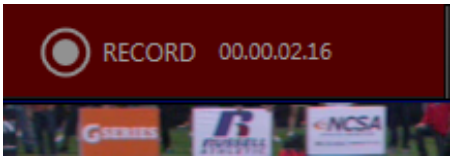


Figure 115

Figure 116

Both the *Replay Desktop* (Figure 115) and *Control Surface* (Figure 116) provide *Record* buttons. As you'd expect, these controls do the same thing – that is, they toggle recording of audio-visual data on and off (hold down *SHIFT* when pushing *RECORD* on the *Control Surface* to end capture).

Note: For any single session, recording stops and restarts automatically after 24 hours, to create a new sequential file. A few frames may be dropped during the interval between ending and resumption of capture. (Timecode dropouts can also result in a break in the recorded files.)

INFORMATION DISPLAYS

The *Replay Desktop* version of the *Record* button is accompanied by two useful data displays, *Time Recorded* and *Left On Disk*. The former keeps track of the duration of all material recorded for the current session. The latter shows an estimate of remaining storage space on the 'most full' volume currently assigned to capture (this display takes a moment or two to initialize when recording is started.)

AUTOMATIC RECORDING

Normally, you would manually enable *Record* when your production begins. In the event you overlook doing so for any reason, however, certain operations will automatically enable recording – for example, pressing the (mark) *IN* or *OUT* buttons enables *Record* when necessary (see Section 8.10).

Reminder: Previously recorded data can be sent to 3Play™ outputs even with Record off. For live sources, of course, operations such as STOP, or speed changes can only be applied when recording is active (this permits the system to automatically switch to Delayed playback mode).

'RECORD EVENTS'

Each time *Record* is newly enabled, a special event row is automatically added to the *CLIP LIST*. The 'record event' has a single frame *Duration*, and provides a convenient reference point.

Tip: The default "Started Recording" notation in the Memo columns of record events can be edited in the standard ways.

10.4 GRAB

At times, you may find it very useful to grab still images from the sources and outputs (whether for social media sharing purposes or for other uses. This is the purpose of the *Grab* button, located in the *Dashboard* at the top of the *Replay Desktop*. Grab stores images from every camera, plus those *Outputs A* and *B*.

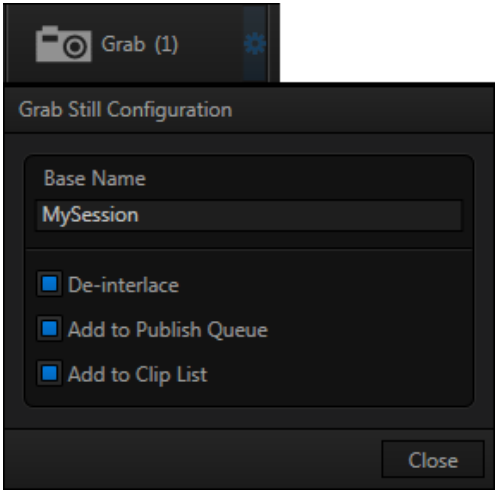


Figure 117

Click the *Configure* button (gear) next to *Grab* to open the *Grab Still Configuration* panel. A default *Base Name* for the files is supplied, or you can supply a name of your own choosing. The name will be numerically incremented as required. Enable *De-Interlace* if you wish to avoid a 'comb' effect caused by inter-frame motion in fielded sessions.

Enable the *Add to Clip List* switch to automatically include newly captured clips at the end of the current *CLIP LIST* tab, ready for immediate playback during the live production.

Close the *Grab Still Configuration* panel by clicking *Close*, or clicking anywhere outside the panel. Then click the *Grab* button to capture images to your hard drive. Image files are stored in a folder named for the session inside the main *Still* folder (a sub-folder is created for the supplementary files captured from each input).

Hint: During a session, the 'grab counter' situated beside the button keeps track of the number of images stored for the current base name entry.

11 THE CLIP LIST

The core functionality of your NewTek 3Play™ is to capture multiple views of live events, and allow you to quickly recall and display any portion of that recorded footage with ease and accuracy.

The CLIP LIST is first stop for newly recorded media, and also serves as the library where production assets are organized and managed. It provides a wealth of convenient features to help you find and display the perfect clip on a moment's notice.

The central band of the *Replay Desktop* – between the upper monitoring section and the *PLAY LIST* pane below – is home to the *CLIP LIST*, along with related controls and features (Figure 118).

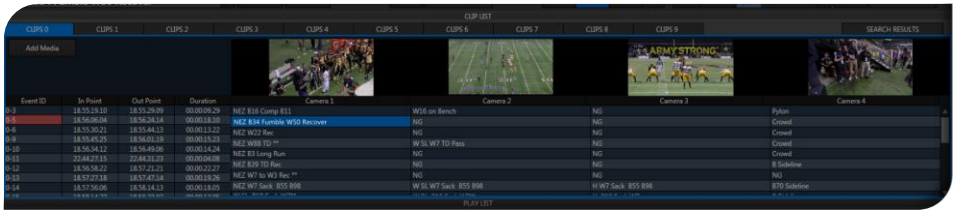


Figure 118

The *CLIP LIST* is the receptacle for timed *events* that you *mark* during the course of your production. It presents the different recorded camera angles for each 'event', marked by an *In Point* and an *Out Point*) on one row of a spreadsheet style table.

11.1 TITLEBAR TOOLS

The *CLIP LIST* titlebar contains several important tools and features, discussed next (see also *Clip Angle Preview* monitors under Options in Section 6.4.2).

11.1.1 TABS

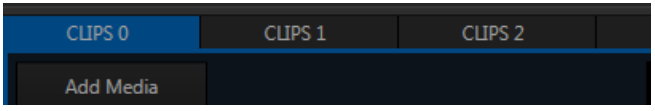


Figure 119

The *CLIPS LIST* normally comprises ten tabbed pages you can use to organize your media (sessions created on an older 3Play model show 16 tabs). To display a specific tab, simply click it. Alternatively, you can navigate tabs using left or right TAB buttons on the *Control Surface* with the *Source Delegate set* to *CLIP LIST*; or, finally, type a number (0-9) and punch GO TO on the control surface to jump to a specific tab.

Tip: On smaller screens, use the < and > buttons at either end of the titlebar tab row to access tabs at that have scrolled out of view.

Newly marked events (and newly added media files) are always added below existing rows on the current page.

11.1.2 TAB MENU

Right-clicking a tab displays a context menu holding just one item – *Rename* lets you give each tab a unique name to suit your needs.

11.1.3 EVENT MENU

A second menu (Figure 120) is shown when you right-click on any event field.

This menu allows you to *Cut, Copy, Paste* or *Delete* the entire event. *Copy* and *Paste* between *CLIP LIST* tabs, or paste selected events (including multi-selections) into the *PLAY LIST*. (Pasting into the *PLAY LIST* adds the entire event row – that is, all angles – into the target *PLAY LIST* tab.)

In addition, you can *Undo* and *Redo* (also available using standard keyboard shortcuts), set the *Audio Level* for all angles of selected events, or add selected angles to the *Publish Queue*.

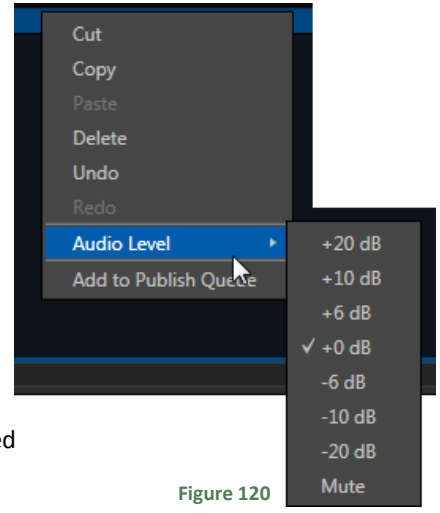


Figure 120

11.1.4 SEARCH RESULTS

Figure 121

This special tab, situated at right in the CLIP LIST, displays all events that match the criteria you have supplied when performing *Search* operations. The results displayed in the tab are persistent, and remain available for other operations to be performed until you perform another *Search*. Conveniently, the active search criteria are shown inside parentheses to the right of the *Search Results* label.

Tip: See Section 13.4 for more on using Search.

11.1.5 ADD MEDIA

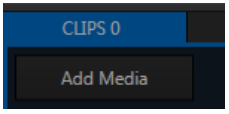


Figure 122

It is possible to include video clips (and still images) in the *CLIP LIST***.** Such files may have been imported into the session using the *Import Media* feature in *Startup* (see Section 5.3.1), or perhaps are located on another currently mounted volume, such as an external drive. An *Add* (Media) button sits at left below the first *CLIP LIST* tab (Figure 122). Click the button to open 3Play's custom *Media Browser*, which can be used to add video clips or still images to the current *CLIP LIST* page.

Notes:

1) Startup's Import Media feature stores files within the folders of the session structure, but does not insert then into the CLIP LIST. Use the Media Browser to add them as described above. Media added in this manner can be played directly from the CLIP LIST, or be used in a PLAY LIST.

2) Note: Add Media also supports compatible third-party asset management systems. Hold down the keyboard Ctrl key when clicking the + sign to access these tools.

The keyboard shortcut to open the *Media Browser* is F5.

MEDIA BROWSER

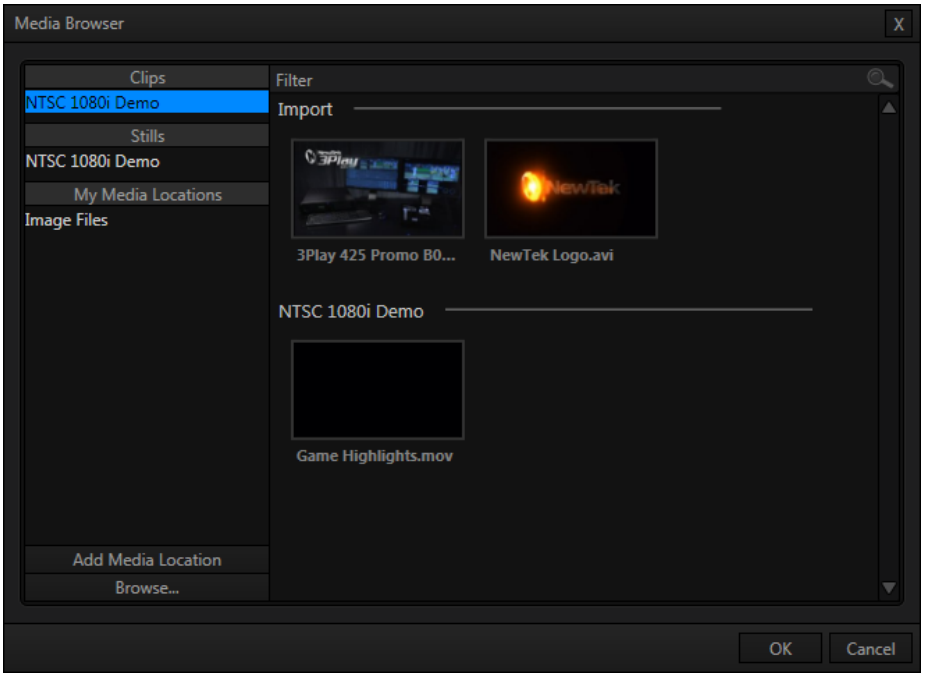


Figure 123

The left and right panes of the *Media Browser* are the *Location List* and *File Pane***,** respectively.

Tip: Press the keyboard Tab key to cycle through the Location List, Filter and File Pane folders.

LOCATION LIST

The *Location List* is a column of favorite "locations", grouped under the headings *Clips*, *Stills*, and *My Media Locations*. A list of sub-headings corresponding to named sessions or other content locations (discussed momentarily) can appear under these main headings.

Media files that were imported from the *Startup Screen* will be shown in the *File Pane* at right when you select a *Location* sub-heading under *Clips* or *Stills*. The third main header in the *Location List* is somewhat special.

CUSTOM LOCATIONS

Clicking the *Add Media Location* button (Figure 124) at the bottom of the *Location List* opens a standard system folder selector.

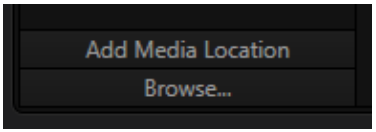


Figure 124

The name of any folder you select using this button is added to the Media Browser's *Location List* under the main-heading *My Media Locations*. (These custom locations can be accessed in others sessions opened by the same user as well.) File recursion for listings under *My Media Locations* is limited to one folder level below the folder (sub-heading) selected in the *Location List*.

Note: Adding a custom Location or adding a clip or image to the CLIP LIST does not import content (copy it into a session folder). Rather, external files are added as linked media. Be aware that large linked files, highly compressed video clips, or media storage devices with slow transfer speed can degrade system performance. It's always best to import files beforehand when the opportunity exists.

BROWSE

The *Browse* button (Figure 124) allows you to navigate using a standard system file window to add files, rather than the custom *Media Browser*.

FILE PANE

Icons appearing in the *File Pane* represent content located in folders under the sub-heading selected at left in the *Locations List*.

These are grouped under horizontal dividers named for sub-folders in the *File Pane*, which allows related content to be organized conveniently. Double click a file (or press *OK*, to append it at the end of the current *CLIP LIST* page. Conveniently, the *File Pane* supports multi-selection as well.

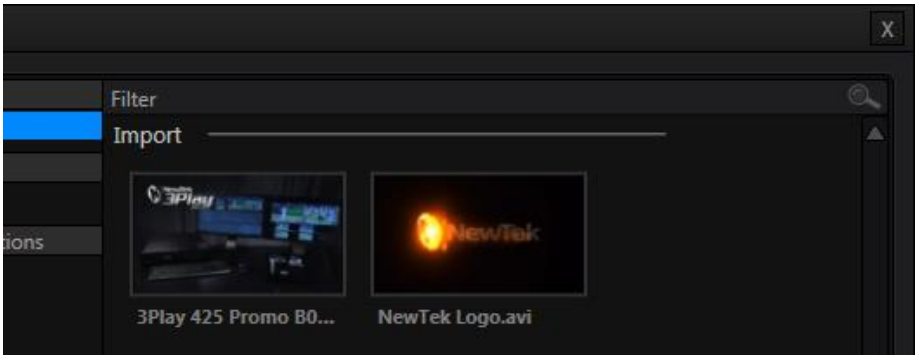


Figure 125

Filenames for media added to the *CLIP LIST* are initially shown in the *Memo* field columns for all camera angles. (Since the *Memo* field is editable, you can modify these entries without breaking the link to the file. This allows the *Memo* entry to serve as an alias if so desired).

The *In Point* for a video file is initially 00:00:00.00, unless the file has embedded timecode (in which case the clip's start timecode serves as for the *In Point*). The *Out Point* and *Duration* initially reflect the full duration of the file on disk. Still image duration is initially set to the value selected in the *Options menu* (default, 5 seconds) – see Section 6.4.2).

FILE FILTERS

Figure 126

The *File Pane* view is filtered to show only relevant content. For example, the *Media Browser* is also used in the *PLAY LIST* (discussed later) to let you choose a music file. In this case, only audio files are shown.

An additional *user-configured* filter appears above the *File Pane*. This is a 'smart filter' which quickly locates files matching criteria you enter, doing so even as you type. If you enter "goal" into the filter field, the *File Pane* displays all files at the current location with that text string in their filenames, and so on.

CONTEXT MENUS

Right-click a *Location* listed under *My Media Locations* to show a context menu with two items in it. *Remove* de-lists the location (but does not delete the folder and its contents from the hard drive or other volume where it is located). *Browse* lets you use the system file browser to add files.

Note: This menu is exclusively for use in the "My Media Location" section, and is not available for other headings in the Location List.

Right-click on a file icon in the *right-hand* pane to show a menu providing *Rename* and *Delete* options. Be warned – *Delete* really *does* remove content from the hard drive (this menu is not shown if the selected item is write-protected).

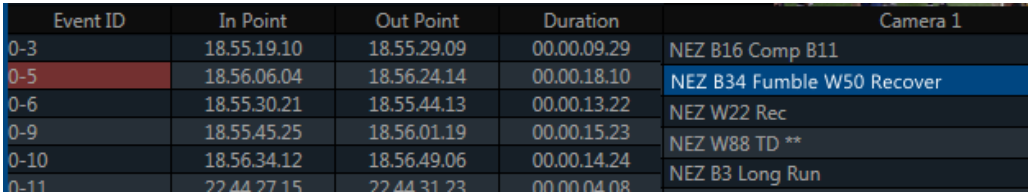
11.2 MEDIA ASSET MANAGEMENT SYSTEMS

The integrated *Media Browser* native to NewTek live production systems is a competent asset management system, enabling to quickly locate and work with files related to your sessions, or external files. Of course, more extensive media asset management systems provided by leading industry providers are also available within the NewTek ecosystem.

To utilize your favorite (supported) third-party asset management systems, you need simply hold down the keyboard *Ctrl* key when invoking a file browser. For example, clicking *ADD MEDIA* with *Ctrl* depressed will show your compatible custom asset management interface, rather than the native Media Browser.

Hint: Alternatively, you can open a standard system file explorer, by holding down the Shift key rather than Ctrl when adding files.

11.3 CLIP LIST TABLE FEATURES



Event ID	In Point	Out Point	Duration	Camera 1
0-3	18.55.19.10	18.55.29.09	00.00.09.29	NEZ B16 Comp B11
0-5	18.56.06.04	18.56.24.14	00.00.18.10	NEZ B34 Fumble W50 Recover
0-6	18.55.30.21	18.55.44.13	00.00.13.22	NEZ W22 Rec
0-9	18.55.45.25	18.56.01.19	00.00.15.23	NEZ W88 TD **
0-10	18.56.34.12	18.56.49.06	00.00.14.24	NEZ B3 Long Run
0-11	22.44.27.15	22.44.31.23	00.00.04.08	

Figure 127

By way of reminder (as discussed in depth back in Section 2.2.1), an event is not merely a 'clip'. It can be likened to a 'time window' on the complete recording – a synchronized segment of all of the captured a/v streams. The *CLIP LIST* provides information about the events that have been marked, along with numerous event organization and management features.

The *CLIP LIST* is laid out in tabbed, spreadsheet-style tables. Labels in the header above the table identify the columns below.

The columns, in order from left to right, are as follows:

- *Event ID* – an editable field showing the numeric event row identifier.
- *In Point* – timecode when the marked event begins
- *Out Point* – timecode when the marked event ends
- *Duration* – the total time for the marked event
- (*Camera 1* – *Camera x*) – the *Memo* fields for recorded clips

> *Tip: Camera columns can display custom labels when one is supplied in the Name field of the Input Configuration panel for the corresponding source.*

11.3.1 EVENT ID

The *Event ID* column shows a unique identifier based on the *CLIP LIST* tab number and event row number, separated by a hyphen. Dragging an event row up or down to re-order it in the list automatically results in a change of the row number for that event and, if necessary, those that follow it in the same tab. *EVENT ID* numbers can also be directly edited, and this ability actually constitutes a very powerful content management tool.

For example:

- Select an *EVENT ID* field, and change the (event row) number following the hyphen. The event row is moved up or down in the current tab accordingly. This works just as well for multi-selected event rows (the original order of the selection is preserved when moving multi-selected event rows).

- Use renumbering to locate certain types of events at easily remembered list locations (for example, you might assign all of your imported graphics clips to the 900's).

- Multi-select several EVENT ID fields, and change the leading (tab) number – voila, the selected events appear in the new tab.

  (If there are existing event rows in the target tab with the same numbers as the new arrivals, these are 'pushed down' and renumbered to make room for the new insertions.)

Note that individual clips (camera angles) each have their own unique numbers, too, though these aren't directly shown in the *CLIP LIST*. *Clip I*D's are in the format 'tab # - event # - camera'. For example, the full *Clip ID* for an angle might be "0-127-3". (This *Clip ID* number is displayed in the *Clip Info* area beneath monitors when playing *CLIP LIST* entries.)

Tip: The first column of PLAY LIST tabs displays a similar, but non-editable, CLIP ID, which includes the angle number. These numbers are local to the PLAY LIST, and are not updated by changes in CLIP LIST order, etc.

11.3.2 IN/OUT POINTS, DURATION (AND TRIMMING)

The initial values in timecode fields are established by your marking operations (using the *IN* and *OUT* buttons on the *Control Surface*). Afterward, they can be modified (within the bounds of actually recorded footage) in several different ways:

- You can simply drag the mouse pointer left or right above a timecode field.

- Or navigate to the field using arrow keys, etc. (snapping the current timecode value into the *FastClip dataview* beneath the *Output A* monitor), *then* edit the existing value using the keyboard and press *ENTER*.

Another approach to trimming is to *Jog* (using the *Control Surface*) to a different timecode position, and then hold down *SHIFT* while pressing *IN* or *OUT* to update the current *In Point* or *Out Point* respectively. (See also Section 11.4, Playing Clip.)

Of course, changing the value of the *In Point* or *Out Point* will have an effect on *Duration*, and vice versa. (Editing *Duration* normally affects the *Out Point*, providing the desired length can be achieved by doing that alone; in rare cases when the *Out Point* reaches the end of the recorded footage, the *In Point* is adjusted as required).

Tip: The Jog control is normally restricted to the established length of the clip, as established by its In Point and Out Point. To move into frames beyond this range, hold down SHIFT.

Naturally, all clips for the current event are affected by trimming operation as above. In the case of multi-selected events, only the displayed clip and associated clips for the same event are trimmed.

Tip: Individual clips that have been added to a PLAY LIST can be trimmed independently, without altering the timing of the original event in the CLIP LIST, or other PLAY LIST clips originally added from the same event.

11.3.3 MEMO FIELDS

Memo fields allow you to insert text notes or *tags* to accompany any clip for an event (for more information about *tagging,* please see Chapter 13). These can identify a player and team, the type of action marked, or any other sort of information that is useful to you.

To create a new *Memo* entry (or overwrite an existing entry completely), simply navigate to the desired *Memo* field, add text to the *dataview* (by typing or using *tags*), and finally press *ENTER* to confirm the entry and update the *Memo*. (To cancel without accepting changes, press the ESC key.)

There are several ways to add to or modify already existing text in a *Memo* field. Click the *Memo* cell with the mouse, or navigate to it using the keyboard or *Control Surface*; the existing text entry is snapped into the *dataview*. Then press *ENTER* (or F2 on the keyboard). The characters of the current entry are selected in the *dataview*, with the cursor placed to the right of the text, ready for you to make additions or edits.

11.3.4 MANAGING EVENTS

Events can be trimmed and named as described in prior sections (see Section 8.10). We've spoken, too, about managing clip order and tab placement by editing the *Event ID* (11.3.1). Events can also be re-ordered by clicking anywhere in their row and dragging up or down.

Cut, Copy and *Paste* functions using the *Control Surface* or keyboard shortcuts (Ctrl + x, Ctrl + c, and Ctrl + v) work just as you would expect, and this offers another way to move events into other tabs. Alternatively, you can access these features from a context menu opened by right-clicking. (This menu also provides *Audio Level* settings for the recorded *events*.) See Section 11.1.3 for more.

The *CLIP LIST* table supports multi-selection as well.

- Press *SHIFT* when clicking an item to select all items between the existing and newly selected item
- Hold down Ctrl on the keyboard while clicking non-adjacent items to select only those individual entries.

Pasted items within the *CLIP LIST* (and *PLAY LIST*) will be inserted below the currently selected event row. When dealing with multi-selected items, insertions are made in their original order.

11.4 PLAYING CLIPS

You can, of course, move through the currently displayed clip by pressing *PLAY* and *STOP*, or by using the *T-Bar* or *Jog Wheel* on the *Control Surface* (see Section 8.6 for more detail). As we're discussing *CLIPS LIST* features in this section, though, note that playback can also be initiated by double-clicking the *Memo* field for a clip, or by clicking the onscreen *Play* button in the transport control group beneath the output monitor for *Channel B* hosts.

11.5 SELECTION, CHANNELS, & DISPLAY

Generally, the highlighted clip in the active event row is shown on the current output (*A* or *B*). In the case of multi-event or multi-clip selections, the last-selected clip is the one displayed on output.

Tip: If a CLIP LIST asset is unavailable for any reason, it is shown with a red border.

To view a different clip for the current event without jumping to the first frame of the clip, press 1 - (4 or 8) on the keyboard Numpad.

Figure 128

The current list selection state is separately stored for each *Channel Delegate* (*A* and *B*), so it's almost as if you had two *CLIP LIST*s. For example, if you select a certain clip when the *Channel Delegate* is *A*, then press *B* and select a different clip in another tab, when you return to *Channel A* the original item and tab for that delegate are still highlighted.

11.5.1 PLAY INDICATOR

Clip selection (and consequently, display on output) normally follows *Memo* field selection, whether by *Control Surface*, keyboard or mouse operation – when no clip is playing. Moving into a timecode field using the arrow keys or *Previous/Next* buttons results in the clip viewed being the one from the first camera in the *CLIP LIST* table.

It is different when a clip is already playing. In this case, the new selection does not usurp the currently delegated channel's output display. To make it clear which clip will be affected by transport operations at any time, the *Event ID* field for a playing clip (or clip that *would* play if you pressed *PLAY*) always has a red background.

11.6 ADD TO PLAY LIST

Selected clips can be added to the current *PLAY LIST* pane in several ways:

- Press the *ADD TO PLAYLIST* button on the *Control Surface*.
- Drag a clip selection onto the *PLAY LIST* pane with the mouse.

Tip: You can also add all clips from one or more events to a PLAY LIST in their natural order in one easy operation. Simply select the Event ID field(s) and proceed as above.

The target insertion point for clips added to the *PLAY LIST* by dragging is shown by a white line before releasing. The other methods insert the new clips below the currently select *PLAY LIST* entry.

12 THE PLAY LIST

At times you will likely wish to assemble and play a compilation of clips forming a highlight reel, or prepare such a sequence for other purposes. The PLAY LIST module supports these special playback features and more.

Multiple PLAY LIST tabs let you organize and switch from one compilation to another with alacrity. PLAY LIST tabs can include imported media and music; content can be re-ordered, trimmed, have its speed and audio levels adjusted, and be rendered as a clip.

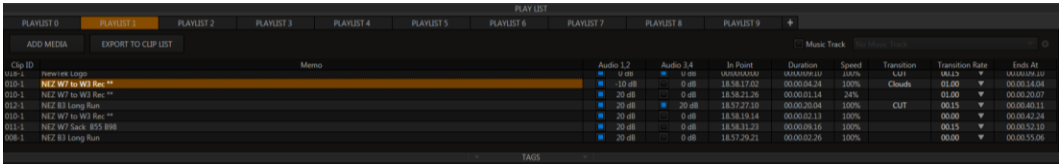


Figure 129

The *PLAY LIST* is similar to the *CLIP LIST*, but offers a number of specialized features and has a different columnar layout. The *PLAY LIST* has a gold border when it is the active *Source Delegate* (see Section 8.3).

Tip: Drag the upper border of the PLAY LIST up or down to show more or less rows. Double-click this drag bar to reset it to its default position.

12.1 TITLEBAR TOOLS

The *PLAY LIST* titlebar contains several important tools and features, discussed next.

12.1.1 TABS

Figure 130

By default, the *PLAY LIST* comprises ten tabbed pages you can use to organize your media. To display a specific tab, simply click it. Alternatively, you can navigate to a tab by pressing the left or right TAB buttons on the *Control Surface* with the *Source Delegate set* to *PLAY LIST*.

12.1.2 TAB MENU

Right-clicking a tab displays a context menu holding two items:

- *Rename* – Give each tab a unique name to suit your needs.
- *Delete* – Tabs in the *PLAY LIST* can be deleted at any time.

Note: The number of tabs in the PLAY LIST is not limited to ten. You can add new tabs easily by clicking the + button at right, next to the last tab. On smaller screens, use the < and > buttons at either end of the titlebar tab row to access tabs at that have scrolled out of view.

12.1.3 ADD MEDIA & EXPORT TO CLIP LIST

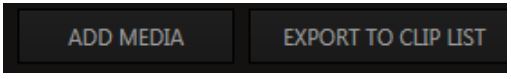


Figure 131

The PLAY LIST's *Add Media* feature works in identical fashion to its sibling in the *CLIP LIST* – see Section 11.1.5.

Tip: Hold the keyboard Shift key when clicking Add Media to use the system file browser.

The nearby *Export to Clip List* button allows you to flatten the entire playlist, including audio, down to a single clip. This clip is then appended to the current *CLIP LIST* page.

12.1.4 MUSIC TOOLS

At the opposite end of the *PLAY LIST* titlebar you will see controls that allow the addition of a background music track for highlight reels (Figure 132). The common WAVE and MP3 audio file formats are supported.

Figure 132

Enable the *Music Track* switch, and select *Browse* from the nearby drop-down menu to open the custom *Media Browser*. (After use, the menu lists your most recent selections for convenience.) The *Media Browser* was discussed back in Section 11.1.5, so we won't review it again here.

Tip: One useful thing to note is that because the Media Browser is context sensitive, when opened from the Music menu it automatically points to Audio locations in its left column (the Locations List).

The switch at left (of the *Music Track* label) allows you to toggle playback of your selection on or off. The duration of the file selected is shown at right.

Tip: Playback of files that are longer than the playlist duration will be automatically truncated (and faded out) when PLAY LIST playback ends.

MUSIC CONFIGURATION

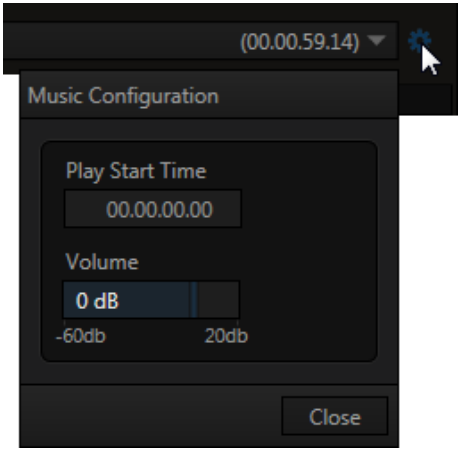


Figure 133

More elaborate controls are located in the *Music Configuration* dialog (Figure 133).

To open the *Music Configuration* panel, click the configuration button (gear) located to the right of the *Music Track* menu. The panel contains two controls as follows:

- The numeric *Play Start Time* control allows play of the selected music file to be delayed until a set time elapses from when *PLAY LIST* playback is first initiated.

  This can be useful when, for example, an imported 'bumper' clip with its own audio precedes the clips in your highlights reel. Click in the number field to manually edit it using the keyboard, or simply drag the mouse pointer left or right above it.

- The *Volume* control allows you to adjust the output level of the selected music file.

12.2 THE PLAY LIST TABLE

Unlike *CLIP LIST* rows, each *PLAY LIST* row contains just one clip (rather than all clips for a given event). As you would expect, playback progresses playlist-style beginning at the currently selected row and proceeding until the end of the playlist (or manual interruption).

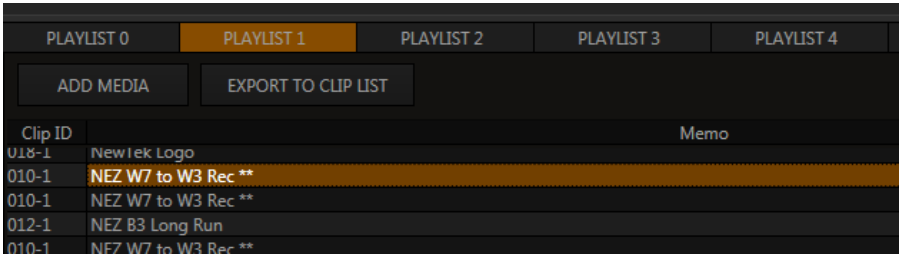


Figure 134

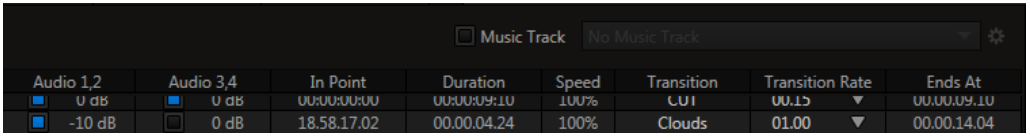


Figure 135

The columns, from left to right (Figure 134 and Figure 135), are labeled as follows:

- *Clip ID* – a non-editable display showing the numeric clip identifier. The hyphenated digit identifies the source angle for the clip.

Note: The PLAY LIST Clip ID is based on the ID of the source added to the PLAY LIST. However, PLAY LIST clips are independent entities. Modifying the Event ID, Memo field, In/Out Points, etc., or even deletion of a clip in the CLIP LIST does not affect its PLAY LIST counterpart. And likewise, editing an item in the PLAY LIST has no effect on CLIP LIST content.

- *Memo* – an editable name or comment.
- *Audio 1, 2* – this column contains a switch allowing you to enable or disable the audio from audio channels 1 and 2 recorded with the clip, and a *Volume* slider that allows you to adjust its level.
- *Audio 3, 4* – as above, but for audio channels 3 and 4.
- *In Point* – timecode field showing the In Point for the clip.
- *Out Point* – timecode when the clip will end.
- *Speed* – a numeric slider allowing you to preset the speed at which the clip will play back.
- *Transition* – select a transition to introduce the next clip in the playlist.
- *Transition rate* – numeric input field allowing you to specify the time for the transition.
- *Ends At* – the total time for the playlist until the end of play for the clip in the current row.

12.3 PLAY LIST PREPARATION

Clips are added to a *PLAY LIST* tab from the *CLIP LIST* in any of several methods, as discussed in Section 11.6. In addition, *PLAY LIST* rows can contain recorded clips or still images imported *Add Media* button in the *PLAY LIST* (see Section 12.1.3).

Once added to the list, *PLAY LIST* rows can be freely re-ordered by dragging them up or down, or using context menu tools (Section 12.4). These tools, along with standard *Cut, Copy* and *Paste* shortcut keys (*Ctrl + x*, *Ctrl + c* and *Ctrl + v*, respectively) allow you to move clips from one *PLAY LIST* tab to another, or within the same page.

12.3.1 CLIP SELECTION

A clip can be selected (highlighted) by navigating to it using the *Control Surface*, keyboard, or direct mouse click. Multi-selection is supported as follows:

- Hold down *SHIFT* while navigating (by any means) to another clip to select both clips and all others between them.

- Select the *Memo* cell for a clip, then press and hold *Ctrl* on the keyboard while clicking another cell to multi-select clips that are not near one another.

Tip: When clips are multi-selected, many operations will affect all selected clips at once. For example, you can turn the sound on or off for a number of clips in this manner.

PLAY INDICATOR

Similar to the *CLIP LIST*, the *Clip ID* column in the *PLAY LIST* shows a red background behind one entry during play to denote the current playhead position in the list.

12.3.2 CHANGING A CLIP

Perhaps, after adding a clip to a playlist, you decide you want to show the same event from a different camera angle. You could go back to the *CLIP LIST*, locate the event, and add a different clip to the playlist. There is a better way to revise angles without changing timing though.

To do so, hold down the *ANGLE* button on the *Control Surface* and use the ◂ and ▸ buttons to change cameras; alternatively, access a specific angle directly by selecting a *number pad* button on the *Control Surface* with *Angle* held down.

Tip: Copy and paste a clip, then edit the copy in this fashion to inset a clip from the same time segment into the Play List without removing the original.

12.3.3 MEMO

Initially, newly added clips show the same *Memo* cell content as the corresponding *CLIP LIST* entry. *PLAY LIST* clips are independent once added, however. Comments can be changed (and the clips can be trimmed) without affecting the original source event.

12.3.4 AUDIO 1, 2 – 3, 4

You'll recall that we discussed the music features offered by the *PLAY LIST* back in Section 12.1.3.

Those features pertain to a music bed, or 'backtrack' for your playlist. In contrast, the two *Audio* columns hold controls governing audio embedded in the clip on the corresponding row in the *PLAY LIST*. The controls in the first column affect the first two audio channels, while the second column relates to channels 3 and 4. Both columns have switches allowing you to enable or disable the associated channels, and an adjustable volume slider.

Tip: Multiple selections are supported for toggling sound on and off, as well as for direct keyboard level adjustments.

12.3.5 IN AND OUT POINTS (TRIMMING CLIPS)

To change the timing of clips in the *PLAY LIST*, you can use the same methods described earlier for the *CLIP LIST* – see Section 11.3.1. Naturally, the value in the *Ends At* field cannot be directly edited. It is a calculated field, showing the cumulative duration for the current clip and all entries in the list above it.

12.3.6 SPEED

Each clip can be played at its own speed – the range for the control is from 10% to 400%.

The numeric slider in the *Speed* column can be modified in the same ways as the similar audio value control. Even when playback is underway, if you select this cell you can also use the *Control Surface* number pad to change the current value, pressing ENTER to complete the operation. (Multiple selections are also supported for direct keyboard adjustments.)

Also when *PLAY LIST* playback is underway, you can use *the T-bar* on the *Control Surface* to further modify *Speed* interactively. (This does not overwrite established clip speed settings in the playlist).

Tip: Adjustments made during playback are applied as multipliers for the playlist clip speed. For example, if the set speed for a PLAY LIST clip is 50%, and you further reduce speed by pressing the 50% Speed Preset on the Control Surface, the actual playback rate is 25%.

12.3.7 TRANSITION

Like the two *Audio* columns, the *Transition* column controls allow you to switch the transition to the next clip on or off, and set a value (in the by now familiar ways) – in this case, for the transition duration.

Figure 136

Tip: Multiple selections are supported for toggling the effect on and off, as well as for direct keyboard effect duration adjustments (remember to press Enter to conclude edits).

The default transition is CUT. Click the cell to show a *transition palette* allowing quick selection of a different effect (Figure 136).

The CUT and FADE items in the *transition palette* are always available. The other thumbnail icons can be replaced with different transitions (including *Animation Store* effects). To do so, move the mouse over a thumbnail icon and click the + sign button that appears. This will open 3Play's *Media Browser.*

Tip: Hold Shift on the keyboard when clicking + to use the standard system file browser instead.

The *Transition rate* column holds numeric controls allowing you to specify the time for each transition. Use the drop-down menu to select a preset time, or drag the mouse left/right over the current value.

12.4 CLIP CONTEXT MENU

The *PLAY LIST* also features a context menu (Figure 137). Not unlike its *CLIP LIST* equivalent, the menu provides access to *Cut, Copy* and *Paste, Delete, Undo* and *Redo* features (also available using standard keyboard shortcuts). It also has two important additional items.

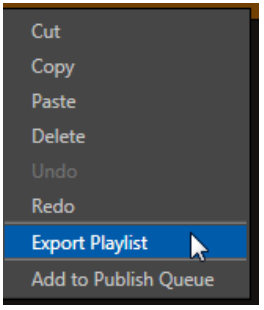


Figure 137

The *Export PLAY LIST* option flattens the entire playlist, including audio, down to a single clip which is appended to the current *CLIP LIST* page. (This is the same feature discussed back in Section 12.1.3.)

The *Add to Publish Queue* item relates to 3Play's social media and file *Publish* features, which provide both batch process and automatic immediate upload functions (discussed in depth in Chapter 15).

12.5 PLAYBACK

To initiate *PLAY LIST* playback, select a clip and press *PLAY* (▶) on the *Control Surface* or *Desktop*; alternatively, double-click a clip's *Memo*.

Figure 138

See Section 12.3.6 regarding the *Speed* adjustments during playback.

12.6 PLAY LIST EDLS

On exiting a session, 3Play™ creates an *EDL* (Edit Decision List) file for each existing playlist. These files can be used to reconstitute a playlist in NLE (non-linear editing) applications with EDL file import support.

3Play's EDL files are created on the master *Session Drive* for the session, in a folder located at *drivename*:\Media\EDL*session name*\.

13 TAGS, SEARCH, & MORE

"Instant replay" – just two words, but how fraught with deep implications. Consider the word "replay": As a minimum, this requires a powerful audio /video recording and playout system.

But "instant" demands even more – not merely storage and playback technology, but a critical need to identify and recall key clips, and do so very, *very* quickly indeed. This chapter will acquaint you with 3Play's innovative data management tools.

13.1 OVERVIEW

3Play provides powerful audio and video capabilities – but for its primary role, this is not enough. Marking events and clips are likewise vital; unless you have an eidetic memory, and can mentally associate hundreds of events with their timecode, getting that perfect clip on the screen on demand would be very difficult.

Enter "metadata": in this case, consisting of descriptive comments and identifiers for your clips, added to *Memo* fields in plain text or using your personal shorthand.

In concert with 3Play's powerful and easy to use search features, *Memo* content lets you locate that special clip in moments.

Of course, *Memo* field content can also be used to help you quickly and easily organize, manage, or publish your data in powerful workflows.

Entering metadata could be very tricky when you are busy marking events. Thankfully, 3Play's potent *TAGS* feature and *FastClip* workflow mitigate this burden, reducing complex *Memo* entries to a few quick button presses. *TAGS* are tightly integrated with the search tools, making for a combination of functionality that you'll find virtually indispensable.

13.1.1 TAGGING WORKFLOW

The *TAGS pane* lets you pre-configure tabbed lists, each a table whose individual cells contain various text entries. You will likely use tabs for different categories of clip identifiers, such as player names, action types, and so on (the default tab names hint at this approach).

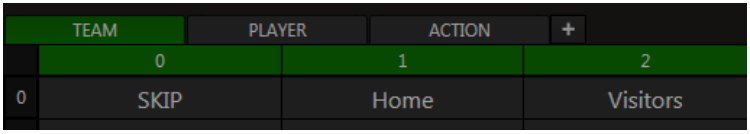


Figure 139

Figure 140

No matter what the content of a given *tag cell* might be, the cell itself is easily identified by its spreadsheet-style coordinates – that is, its row and column number. For example, in Figure 139, the *tag cell* at row 0 and column 2 has the text value "Visitors". The *tag number* for that cell, "02", is easily understood – and equally easily entered.

Tip: The "TEAM" tab in the example actually uses just one row of tags. In such cases, you don't even need to enter the first digit. Simply pushing 2 on the number pad snaps the text value "Visitor" into the FastClip dataview.

Typing a *tag number* on the *Control Surface* number pad (with the *TAG* button lit) snaps the text entry in the corresponding cell into the *dataview*. You can easily build complete sentences with a few number pad button presses using this method.

Finish the operation by pressing *ENTER* to add the final text to a clip *Memo* (or push the *SEARCH* button to use your entry as criteria to quickly find specific clips you have tagged previously.

13.2 THE TAGS BUTTON

3Play's *TAGS* feature relies on the Control Surface *number pad* as its primary input device. Numeric entries made using the keyboard are always treated as literal numeric characters.

Similarly, if the *TAGS* button is not lit, *Control Surface* entries are added to the *dataview* as simple numbers. (It's possible to enter tags by directly clicking cells in the *TAGS* pane with the mouse, but in most cases you'll find it faster to work with the *Control Surface*.)

13.3 THE TAGS PANE

TAGS
TEAM
PLAYER
ACTION
Edit Tags
Auto Advance
0 1 2 3 4 5 6 7 8 9
0 SKIP Allan Squires Jones Brown Robinson Felton Beeson McGuire McCoy
1 Avalon Kennedy King Lowrey Ingram Finch Latour Wiley Harris Ruby
2
3 Moore Major Fromme Newman Zimmer South Singleton Queen Ipswith Penney
4 Bennet Davidson Punk Weembley Aarons Tenneson Avery Vickers Jorache Creeley

Figure 141

Let's explore the inner workings of the *TAGS pane*.

13.3.1 TITLEBAR TOOLS

In a brand new session, the *TAGS* pane initially appears in the form of an innocuous bar (imaginatively labeled *TAGS*) across the bottom of the *Replay Desktop*. This is a drag bar, and also provides several added convenience features related to viewing or hiding the *TAGS* pane.

To begin, double-click the bar (left or right of the *TAGS* label) to expand the pane just high enough to show the *Tabs*, numbered column header row (0-9), and the first row (i.e., row 0) of tag cells. This is the default 'open' *TAGS* bar position.

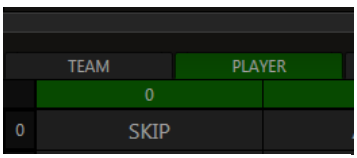


Figure 142

When you move the mouse over the *drag bar* the pointer turns into a double-headed arrow.

Click and drag to move the bar vertically to expose as much of the *TAGS pane* as you wish to see. Double-click the bar at any time to return it to its default ('tabs plus one row') height on the screen. You can also drag the bar to the bottom of the screen to close the pane, but you might prefer another approach, discussed next.

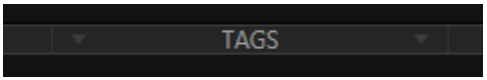


Figure 143

The central label area of the drag bar is bounded by small triangles (Figure 143). The mouse pointer appears as a pointing hand when it is in this zone. Click once here to *minimize* the TAGS pane; click it again to *restore* the *TAGS* pane to its last expanded state.

Tip: Pushing SHIFT + TAGS on the Control Surface has the same effect as clicking the TAGS bar in the central minimize/restore zone.

TABS

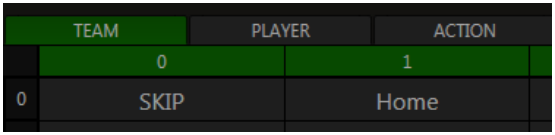


Figure 144

By default, the *TAGS* pane provides ten tabbed pages you can use to organize your media. You can navigate through the tabs by pressing the left or right *TAB* buttons on the *Control Surface* with the *SHIFT* button held down. (Alternatively, simply clicking a specific tab displays it.)

TAB MENU

Right-click a tab to show a context menu holding two items:

- *Rename* – Give each tab a unique name to suit your needs.
- *Delete* – Tabs can be deleted at any time.

Note: The number of tabs is not limited to ten. You can add new tabs easily by clicking the + button at right, next to the last tab. On smaller screens, use the < and > buttons at either end of the titlebar tab row to access tabs at that have scrolled out of view.

EDIT TAGS

You will find the *EDIT TAGS* button at the right-hand end of the *TAGS* pane titlebar (Figure 145). Clicking this button allows you to create a list of tags or modify the existing one (tagging

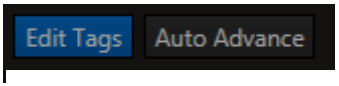


Figure 145

functionality is de-activated).

To create or update a tag, simply enable *EDIT TAGS*, click in a cell, and type. Pressing *ENTER* confirms the edit and moves the cursor to the next *tag cell,* ready to continue. When finished, turn off *EDIT TAGS* to resume normal tagging operation.

Tip: The first cell (0,0) in each tab cell is non-editable, and always shows the word "SKIP" (Figure 144). This fixed cell serves as a 'null' entry that can be especially useful in the Auto-Advance *tagging workflow discussed next.*

AUTO ADVANCE

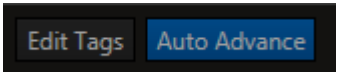


Figure 146

Often, you will want to quickly create a *Memo* comprised of add a short series of tags. The *Auto Advance* feature makes this s simple task. When it is active, the TAGS pane automatically advances to the next tab after a new tag is added, then awaits further input.

13.3.2 A TAGGING EXAMPLE

Suppose, for example, that you have configured three *TAGS tabs* as follows:

TEAM

	0	1	2	3
0	SKIP	Home	Visitors	

PLAYER

	0	1	2	3	4	5	6
0	SKIP	Allan	Squires	Andrews	Kane	Allard	Pope
1	Price	Kennedy	Perry	Duke	Finch	Berry	Briggs

ACTION

	0	1	2	3	4
0	SKIP	bsk intfernc	carry	foul	screen
	3sec	5sec	dbl-d	pers foul	flop

- The *TAG* button is lit on the *Control Surface*
- *Auto Advance* is enabled in the *TAGS pane* titlebar.

As play proceeds, a player commits a foul, and you press (Mark) *OUT* to add the event to the *CLIP LIST.* To build a complete comment for the *Memo* field for the new event, press the following buttons on the *Control Surface*:

10203 ENTER

That's it – you're done! The current *Memo* cell now contains the text below:

Home Squires foul

Let's break this example down, step by step, shall we?

Figure 147

- "TEAM tab entries are both on the first row, so a single digit completes tag selection. Entering *2* added the tag "Home" (followed by a single space) to the *dataview*.
- *Auto Advance* immediately presented the PLAYER tab, which awaited another valid entry.
- The next entry (02) identified the second tag in the top row (Squires), and appended it to the *dataview.*
- Auto Advance kicked in again, moving us to the ACTION tab, where entering 03 added "foul" to the *dataview* content.
- Finally, pressing ENTER updated the selected *Memo*.

Tip: If you hold down SHIFT when pressing ENTER, the tag is sent to the Memo fields for all angles of the current event, rather than just the current cell.

Experience has shown that the numbers of frequently entered tags soon become so familiar that it's often unnecessary to even have the TAGS pane open to add the desired metadata to clips.

13.3.3 SKIP

Suppose you want to bypass the TEAM tab in the steps above. You can move to a different tab using SHIFT + TAB (left or right) on the *Control Surface*. It will often be much faster, though, to simply punch the 0 (zero) button (once or twice, as dictated by the number of active rows in the tab).

This selects the *SKIP* cell at upper left in each tabbed pane and – with *Auto Advance* on – skips instantly to the next tab, without pushing a tag to the *dataview*.

13.3.4 INPUT HINTING

Notice that, while tagging, either the first *column* or first *row* of the TAGS pane is displayed with a bright green highlight.

As mentioned earlier, it's not necessary to enter the row number when entries in a *TAGS* tab only use the first row (row 0).

A single digit suffices to identify the desired tag in this case. Often, though, two digits are required to fully identify a specific tag.

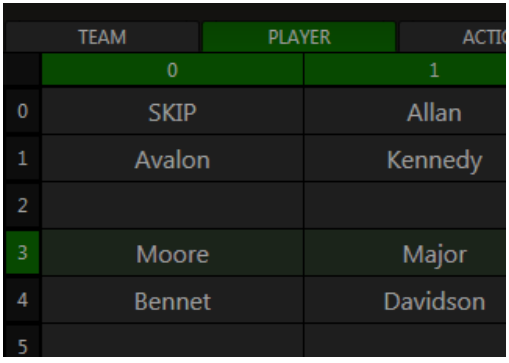


Figure 148

The green highlighting in the *TAGS* tables provide visual cues to tell you which number you need to enter next. If the row numbers are highlighted, you know that a row number is required. After a row number is entered, column numbers are highlighted. (In Figure 148, a row number – 3 – has been entered; the TAGS pane patiently awaits a column number.)

13.4 SEARCH

Searching for something … your glasses, car keys, your spouse (!) … can be oh-so tedious. It's hard to beat the joy and relief when the search is successful, however – and sooner is always better than later.

In an instant replay setting, too, there is no time to waste (if you can't find just the right clip faster than your director can blink, you may just find yourself looking for a new job.) In recognition of the vital importance of this matter, fast, innovative search-related functions are intimately integrated throughout 3Play's workflow, interface and *Control Surface* operations.

13.4.1 DATAVIEW ENTRIES

Figure 149

By this point in the manual, 3Play's *dataview* has been mentioned over and over again, in many different contexts:

- Every character of textual and numeric input to the system, whether punched on the *Control Surface* or typed on the keyboard, flows through the *FastClip dataview*.
- Likewise almost every snippet of legible information – be it an *Event* or *Clip ID*, timecode value, *Memo* entry, or tag – that appears on the *Replay Desktop* can be easily and quickly directed to the *dataview* by simply navigating to it using the *Control Surface*, keyboard or mouse click.

The benefits of this 'metadata pipeline' become abundantly clear in connection with 3Play's *Search* functions. In a nutshell, searching works as follows:

1. Post suitable search criteria to the *dataview*.
2. Execute an operation using the criteria.

Let's add some detail about those simple steps. First, let's consider search criteria – what forms it can take, where it comes from, and how it can be operated on.

ENTERING CRITERIA

Letters, numerals, 'type-able' symbols, words or phrases combining the aforementioned, can all serve as search criteria. Timecode, *Clip* and *Event IDs* work, too, for certain operations.

Of course, you can go 'old school' and just type your criteria into the *dataview* using the keyboard, but – since simply selecting a cell on *the Replay Desktop* snaps its value into the *dataview* (Figure 149), often one need only navigate to (or click) a cell to supply search criteria without any typing at all. Similarly, the *TAGS* feature lets you quickly populate the *dataview* with multiple terms perfectly suited to many searches.

TAGS AS CRITERIA

Earlier in the chapter (Section 13.2), we detailed various aspects of the *TAGS* feature, showing how it can quickly be used to build (simple or more) complex *Memo* entries.

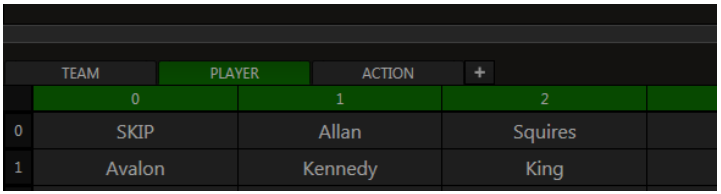


Figure 150

The *TAGS* feature can also be used to quickly add simple or more elaborate search criteria to the *dataview*. The workflow for adding tags is identical, the only change being that instead of pressing ENTER (which would post a *Memo* entry) one presses the *SEARCH* or *GO TO* button instead as desired.

Of course, with the *TAGS* button on the *Control Surface* off, the *Control Surface* supports direct numeric entry.

13.4.2 FINDING MATCHES

It's helpful to know that 3Play's search engine performs a logical OR operation using the criteria you supply. Thus an exact match of every element of the search criteria is not required. Your

search criteria can include, for example, multiple words, or consecutive character strings, including numbers or common symbols.

When a SEARCH operation is executed, event rows with are listed in the *Search Result* pane (*CLIP LIST*) whenever of their cells contains elements matching *any* search criteria item tab.

Let's consider some simple examples. Suppose you have made the following into *Memo* entries (Figure 151):

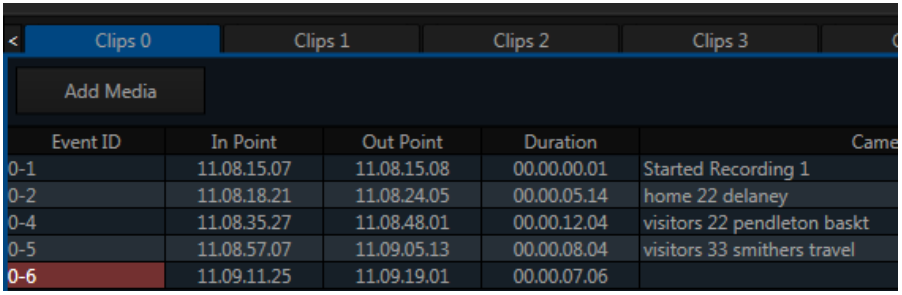


Figure 151

The table below illustrates which events will be added to the *Search Results* tab for a SEARCH operation based on the criteria shown at left:

	Search Criteria	**Search Result(s)**		
a.	home	0-2		
b.	hom	0-2		
c.	22	0-2	0-4	
d.	visitors 22	0-2	0-4	0-5
e.	"visitors 22"		0-4	

First, we can see that a 'perfect match' is not necessary. The first two *SEARCH* operations produce identical results regardless of whether the criteria entered is "Home" or "Hom".

Next, take a look at the example in row d. Notice that including "visitors" in the criteria did not suffice to exclude Event # 0-2 from the result. Let's consider how SEARCH processing produced this result to see why not:

- First, the *SEARCH* process checked to see whether the leading element in the criteria (i.e., “visitors”, without quotes) was found in any *Memo* field. This cause the inclusion of Events # 0-2 and 0-5 in the *Search Result*.

- Next, the second element of the criteria (22) was evaluated. This resulted in Event # 0-4 being included along with prior matches in the result.

We can see that 3Play’s OR type search processing included matches for *any* element included in the criteria. It’s useful to observe, too, that quotation marks can be used to force the search to treat multiple elements in the criteria as an inseparable unit.

For example, in the last two rows of the table above the criteria are identical, save for one thing: in the second instance, quotation marks surround the two elements (i.e., “visitors 22”). The search treats the enclosed items as a single object, and produces a corresponding result.

Numbers are treated like any other character when included in the criteria for a *SEARCH,* but play different roles when used with *GO TO*, discussed next.

13.4.3 GO TO

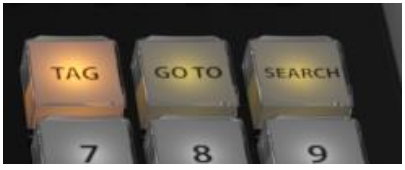


Figure 152

As discussed in Chapter 8 (The Control Surface), the *GO TO* button has several functions. Pressed alone, *GO TO* takes an Event ID number as input, and takes you to the matching event row in the *CLIP LIST* when successful.

It’s not necessary to enter hyphens for many *GO TO* operations to work correctly. Thus *GO TO* operations with “0-4” and “04” as input criteria produce identical outcomes. Partial entries can be useful too; recall that entering a single digit and pressing GO TO jumps to the corresponding *CLIP LIST* tab). Use hyphenated digits with an added number to specify the clip angle (for example, press 2-034-4 followed by the GO TO button jumps to the fourth angle for clip 034 in Clip tab 2).

Pushing *SHIFT* with *GO TO* performs a 'go to timecode' operation (which, you'll recall, put 3Play into *Delayed* playback mode). Timecode entries are properly formatted as *hh.mm.ss.ff* (hour, minute, seconds, frames), but – just as hyphens can be omitted for GO TO (Event ID #) operations, so punctuation is optional for timecode entries.

Omit digits thoughtfully for timecode operations, however. GO TO timecode operations parse the search value right to left. The entry 1130 (or 11.30) will be assumed to represent the timecode value 00.00:11:20 (11 seconds, 20 frames), rather than 11.20.00.00 (11 hours, 20 minutes).

Tip: Remember that precise numeric entries can be 'snapped' into the dataview (and used for GO TO operations) by simply selecting In/Out Point cells in the CLIP or PLAY LIST.

13.4.4 SEARCH RESULTS TAB

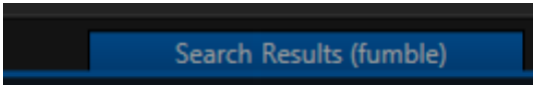


Figure 153

The *Search Results* tab appears at right in the header of the *CLIP LIST*. Matches from SEARCH operations are listed in this pane.

Items shown in the *Results* tab can be added to *other* tabs using copy and paste techniques, as well as (*PLAY LIST* only) using the ADD TO PLAY LIST button on the *Control Surface*, or simply by dragging them.

Tip: A red border is drawn around the dataview window when an entry is deemed to be inappropriate for the SEARCH or GO TO operation you choose.

Naturally, you can also select cells in the *Search Results* tab to snap their values into the dataview, and then use the value for other purposes.

For example: *Search Results* does not support *CUT* operations. This would seem to prevent actually moving an item into a new tab (as compared to a copy/paste that results in a *duplicate* of the event). However, you *can* successfully move items as follows:

- Select an *Event ID* in *Search Results* to snap it into the *dataview.*
- Punch *GO TO,* which locates the original clip in its own tab.
- Press *CUT*, and *PASTE* the item into another location.

13.5 IMPORT TAGS

Imagine using everyday tools like Microsoft Excel® to enter and manage your tags. Simply save the correctly formatted spreadsheet in .CSV format and import it into 3Play's Tags pane.

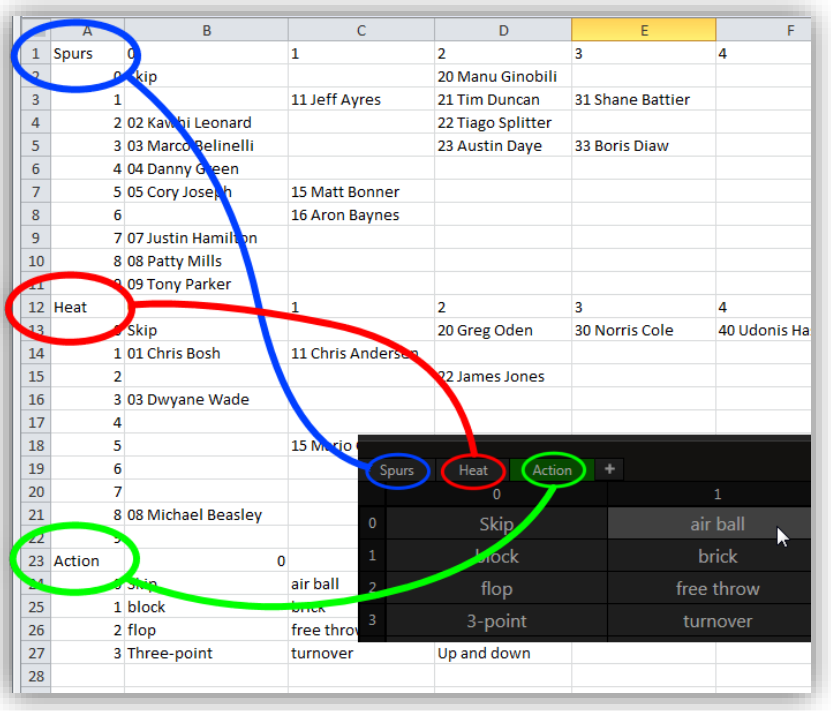


Figure 154

You can import just one new tab to your current Tags list (say, to import the players list for a visiting team), or you might import an entire multi-tabbed list from in your favorite spreadsheet, managing its content externally (Figure 154).

13.5.1 CSV EXAMPLE

Prepare the CSV file on a single sheet in your spreadsheet software of choice. Identify each tabbed TAGS page by an entry in the first column. The example below illustrates the correct format for a table with two tabs named “Home” and “Guests”:

Home	0	1	2	3	4	5	6	7	8	9
0	Skip		20 Ginobili							
1		11 Ayres	21 Duncan	31 Battier						
2	02 Leonard		22 Splitter							
3	03 Belinelli		23 Daye	33 Diaw						
4	04 Green									
5	05 Joseph	15 Bonner								
6		16 Baynes								
7	07 Hamilton									
8	08 Mills									
9	09 Parker									
Guests	0	1	2	3	4	5	6	7	8	9
0	Skip		20 Oden	30 Cole	40 Haslem		06 James			9 Lewis
1	01 Bosh	11 Andersen								
2			22 Jones							
3	03 Wade									
4										
5		15 Chalmers								
6										
7										
8	08 Beasley									
9										0 Douglas

Notes:

- Row and column numbers for each tabbed list must be entered as shown.
- Any entry made in the ‘Skip” cells will be ignored.

14 TRANSITIONS

3Play's powerful transitions deliver sophisticated style and state of the art capabilities to your replay output. They can even include custom graphics and audio, adding powerful emotional impact.

This section explains the selection and use of appropriate transition effect, various transition workflows that 3Play offers, and the included graphics tools enabling you to author custom transitions.

Figure 155

Dynamic transition effects can be used to introduce replay clips with added drama and excitement. 3Play supports different types of effects (including custom transitions) as well as more than one workflow capable of effects.

14.1 PLAY LIST TRANSITIONS

Many replay systems provide the ability to play a prepared sequence of clips with transitions between them for use as highlight reels. As a rule, using transitions in this manner requires you to dedicate not just one, but two outputs toward achieving transition effects between clips.

3Play's *PLAY LIST* module, however, directly supports integrated transition effects, eliminating the need to dedicate an extra output for this purpose. We've covered these tools in depth already (see Section 12.3.7), so we will not belabor the advantages of this workflow here.

14.2 PROGRAM-PREVIEW TRANSITIONS

Of course you might, instead, want to use 3Play's colorful transitions apart from more elaborate *PLAY LIST* preparation. For example, you might want to quickly run replays with dramatic effect specifically tailored to the sport, team, or play that it will show.

To distinguish this workflow from *PLAY LIST* usage, we borrow 'program-preview' terminology from the traditional video switcher realm, which employs a very similar approach.

14.2.1 'PROGRAM OUT'

In this workflow, one output is assigned 'program out' duties. The 'program output' comprises the signal path for principal replay output (i.e., the a/v stream selected on the 'program bus') to downstream devices, whether for direct display or further processes such as switching, recording, etc. In this alternative workflow, *Channel B* serves as 3Play's 'program bus'.

14.2.2 'PREVIEW OUT'

A second channel (often referred to as the 'preview bus') serves a special preparatory role, allowing you to queue up the source you intend to send to 'program out' next. *Channel A* thus becomes 3Play's surrogate 'preview bus'.

14.2.3 AUTO WORKFLOW

Using 3Play in a program-preview workflow could scarcely be simpler – or more powerful. Let's consider an example:

- *Channel B* ('program') is sending a live camera feed to a downstream stadium display
- With control delegated to *Channel A*, you select a replay clip
- Press the *Auto* button on the *Control Surface*

Instantly, the currently selected transition introduces the replay clip from *Channel A* ('preview'). Replay playback commences automatically from the clip's *In Point.*

- If *LOOP* is enabled in the *Transport controls*, the replay source will continue playing over and over until you interrupt it, perhaps by a *TAKE*, or another *AUTO* operation.

- Otherwise, it might play right past the marked *Out Point* to the limit established by the *Out Point Padding* setting (*Options* menu – see Section 6.4.2), giving you a little leeway to safely transition back to the original source (now on 'preview').

14.3 TRANSITION EFFECTS

3Play supports two distinct types of transitional effect. *Standard effects* could be loosely lumped under the description of wipes. In generally, this type of effect involves the pixels of the current scene being progressively replaced by those of the incoming image.

Figure 156

In many cases, these transitions involve a blending of colors that follows some sort of pattern (Figure 156) – whether a simple 'full-screen' fade, an animated 'radar' or 'blinds' pattern, or something more elaborate. This said, some wipes in this class also perform translation (i.e., shifting of the imagery on x and y axes during the effect) and even stretching, compression, and rotation effects.

3Play also offers a second type of transitional effect called (for reasons that will be obvious) *Animation Store* effects. Even compared to the effects provided by typical broadcast video switchers, 3Play's *Animation Store* transitions (Figure 157) constitute a powerful effect solution, eliminating the need to combine separate animations, transition effects, and sounds on the fly.

Figure 157

Animation Store effects can do everything that standard wipes can do, but usually also include embedded full-color animated overlays (hence the moniker) and can even include audio effects.

A useful set of sample *Animation Store* effects are included with your *3Play*, but the real power of the *Animation Store* system is that you can quite easily create custom effects using the supplied *Animation Store Creator* add-on application. You can employ your own custom graphics, such as team logos, and more elaborate overlay animations along and embedded audio.

Note: Audio embedded in Animation Store effects is not currently supported for the program-preview transitions, but can be heard in PLAY LIST effects.

ANIMATION STORE CREATOR

The *Animation Store Creator* application is launched from 3Play's *Startup>Home page*. Complete documentation for the application can be found using the *Help* icon (also on the *Home* page).

Briefly, to create an *Animation Store* effect, a black and white animated image sequence defines the transparency. When warping is desired, you prepare this *Wipe Sequence* animation using a supplied gradient image to stand in for video imagery.

This *Wipe Sequence* animation is then combined with a full-color *Overlay Animation* (Figure 157) to produce the final effect, which you can then apply on demand simply by pressing the *AUTO button*.

14.3.1 EFFECT SETTINGS

The settings for transition effects are very simple. Of course the most basic of these is the selection of a specific effect.

Figure 158

Click the small thumbnail effect beside the *AUTO* button in the onscreen *Transition control* area to reveal a palette showing nine effect icons for quick access. The features and options provided in this palette are identical to those discussed previously (Section 12.3.7) in connection the very similar *PLAY LIST* transition effects.

Figure 159

Transition timing for the current effect is set using the menu located just to the right of the effect icon. You can choose *S*(slow), *M*(medium) or *F*(fast) effect speed presets using the menu. Note that the default preset times is automatically adjusted for certain effects, and will also update depending on which effect type you choose. You can also click the value shown to edit it directly with the keyboard, or drag the mouse right or left over it to raise or lower the current value.

15 DSKS (OVERLAYS)

3Play offers two fully independent DSK (Downstream Keyer) overlay channels – one for each primary output. Both provide integral alpha channel support and independent Positioner controls (including edge cropping). Video and graphics overlays can be scaled and cropped, and placed anywhere within the video frame.

Overlay channels can be used creatively to layer video sources for compelling highlights and much, much more. The combined power of overlay layers and replay open up endless new opportunities.

15.1 OVERVIEW

Conventional replay systems are unable to show two synchronized angles of an event on a single output.

Not only does 3Play let you overlay an alternate, fully synchronized angle of instant slow motion replay on another and send it to output, you can also overlay live video onto another source (live or recorded) or vice versa.

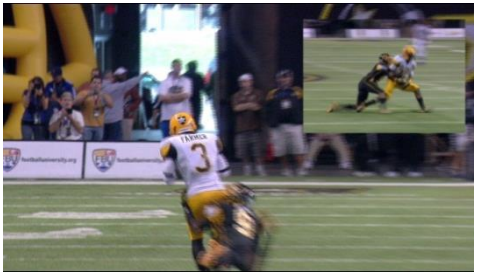


Figure 160

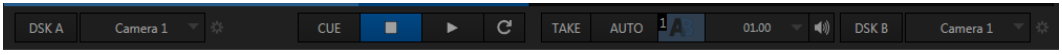


Figure 161

DSK allow you, for example, to continue to display live action while playing highlights, show replays or ads in an insert, or display two live video angles at once. The combinations are almost limitless, providing incredible flexibility to design workflow solutions tailored to very specific requirements previously requiring multiple systems.

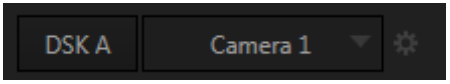


Figure 162

Enabling the DSK display is as simple as clicking the *DSK A* or *DSK B* button.

15.1.1 OVERLAY OUTPUT A OR B

In addition to being able to overlay one angle onto another, you can also overlay the entire alternate output on top of your display. For example:

- Show the video from *Output A* – even including *DSK A* above it – on top *Output B* to produce a 'picture-in-picture-in-picture' composition - then transition between them.
- Use *DSK* position tools to create a 'squeeze-back' of the assigned source. You can cover two independent events simultaneously in this manner; show live gameplay while playing a highlight reel, or a commentator during an instant replay, and much more.

Note: When working with a Program-Preview transition workflow (See Chapter 14), the DSK channels swap each time a Take or Auto is performed.

15.1.2 OVERLAY GRAPHICS AND LOGOS

Not only can you overlay highlights, clips and live cameras, but you can also use overlays to display graphics, with full key and fill support. For many creative and potentially *rewarding* applications, a single operator can run the replay system and also display timely graphics and overlays. When combined with single click stinger capabilities, the ability to perform colorful custom transitions to and from live video and to flexibly overlay other graphic and video inserts at the same time, your 3Play can serve as a complete house production system.

15.1.3 OFFICIATING AND OVERLAYS

Replays are also obviously important for referee and coaching use. Instant replay for officiating purposes is increasingly a mandatory requirement of numerous leagues.

A dedicated camera capturing the clock in sync with other camera angles can easily be overlaid over outputs for absolutely guaranteed synchronization with the actual game time. Too, the ability for coaches or referees to view two angles of a play at the same time is truly invaluable.

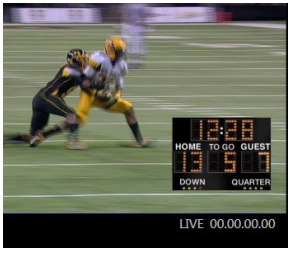


Figure 163

If that is not enough, since 3Play's dual outputs can be operated in "gang" mode, officials can easily review separate angles, whether on a single screen or side by side on two simultaneously (each with their own synchronized clock overlays). And because the clock cams are overlaid, rather than embedded in the angle shots, they can be freely cropped, scaled, and even re-positioned at any time if they should happen to the action.

15.2 SOURCE OPTIONS

A huge and diverse list of potential sources is available for each of 3Play's two DSKs (*DSK A* and *B*).

The various alternatives are accessed via drop-down menus supplied for each DSK, and include the following:

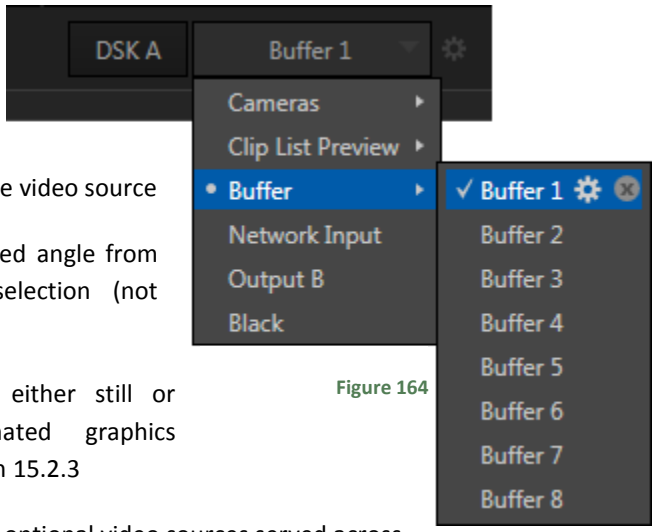


Figure 164

- **Cameras** – any connected live video source
- **Clip List Preview** – a selected angle from the current *CLIPS LIST* selection (not available in 3Play Mini)
- **Buffer** – Buffers can be either still or specially prepared animated graphics overlay sources – see Section 15.2.3
- **Network Input** – An array of optional video sources served across a network can be configured as DSK sources – see Section 15.2.4
- **Output A/B –** The video program stream from the 'other' 3Play output – A or B, as appropriate
- **Black –** Not to be overlooked, the Black overlay option can serve as a handy source for 'fade to black' operations.

15.2.1 CAMERAS

Select any connected live video source as a *Buffer* source, and you can (for example) employ it in a picture-in-picture composition. You might use this, for example, to show a shot of a commentator overlaid on a clip he is discussing – or vice versa.

15.2.2 CLIP LIST PREVIEW(3PLAY 4800 AND 440)

Clip List Preview selections correspond to the different angles available for the currently select event row in your *CLIP LIST*. This permits you, for example, to show different angles of an event as a picture-in-picture composition scaled down in similar fashion.

Note that this selection actually displays the same (reduced resolution) clips shown in the small clip preview monitors at the top of the CLIP LIST panel. Generally, they will be quite adequate for use in many compositions, but may look 'soft' if used at larger sizes.

15.2.3 BUFFERS

3Play's powerful *Buffer* system provides especially convenient graphics and animation sources for its two *DSK* channels. Buffer content is retained in memory for immediate recall and display. Thus *Buffers* can often be even more useful than similar imagery stored in *CLIPS LISTS*, since they free the *CLIPS LIST* up to display other content.

Hint: Up to 8 different graphics or animated buffers can be loaded into the DSK source menu for quick access later.

Using a buffer as a *DSK* source also eliminates the risk of accidentally displaying the wrong graphic (as might otherwise happen if the current *CLIPS LIST* selection was not the one intended).

SELECTING AND MANAGING BUFFERS

When you move the mouse over a *Buffer* entry in the source menu (e.g., *Buffer 1*) a gear gadget appears next to its label. Click the gear to display 3Play's *Media Browser* (see Section 11.1.5), and then pick a suitable file to populate that buffer preset.

Note: Buffers are linked to the original source file on disk. Not surprisingly, the link will fail if the original file is moved, or deleted from the hard drive.

The *Browser* allows selection of files in most still image formats (including those with embedded transparency), along with special *animation effects.* Examples of the latter type are supplied, but you can convert custom animation sequences created in your favorite application to this format using the supplied *Animation Store Creator* add-on application (see the sub-heading Animation Store Creator in Section 14.3). *Animation effects* can be of either looping or auto-run type. The type is determined in the supplied *Animation Store Creator* utility when the effect is generated. Next to the gear you will observe a *Remove* (X) gadget. Click this to clear the current entry, freeing up system graphics memory resources at the same time. Still image *Buffers* have another very valuable ability, discussed next.

WATCH FOLDERS

The *Frame Buffer* folder is actually a "watch folder", and you can optionally share it across a network. *Share Media Folders and Buffers* is easily enabled or disabled even during a live production using the *File* menu at the left-hand end of the *Dashboard*.

For still image buffers, when you save an image into the correct location the corresponding buffer immediately updates, even if it is currently displayed. This lets you refresh overlays virtually instantly from any computer on the same network, using suitable graphics applications such as Photoshop®.

The files which serve individual *buffers* are located in clearly named sub-folders of the *Frame Buffer* folder for each session. These folders are arranged as follows:

Sessiondrive:\3Play\Sessions*sessionname*\Frame Buffer\Buffer (#)

e.g., D: \3Play \Sessions\MySession\Frame Buffer\Buffer 3

The *Frame Buffer* folder for the current session is accessible on the network when sharing is enabled.

Note: The special "Frame Buffer" share name assignment is dynamic. Network sharing is activated and the current Buffer path is automatically updated whenever you enter a session with the option enabled. This ensures that applications on networked systems can remotely access and update buffer graphics for the current TriCaster session.

- Still image *Buffers* are normally stored using the popular 32 bit PNG (Portable Network Graphics) format, but other formats are also supported.
- Specific filenames are not important in the buffer workflow. (Actually, multiple media files with different names can reside in buffer folders. The system always shows the 'newest' file – that is, the one with the most recent modification date.

15.2.4 NETWORK INPUT

The ability to bring network video sources into 3Play as DSK sources is the gateway to a truly staggering range of potential opportunities. Consider just a few of these:

- Use NewTek's own LiveText™ titling application to supply graphics and title feeds to 3Play across a network.
- Many third party products, too, can send and update scoring, timing, statistics, and similar displays to 3Play's network input.
- Insert sponsor messages to add dynamic visuals and generate revenue.
- Overlay displays from (Windows® or OS X® based) computer systems (via iVGA™).
- Use a network-connected telestration system to provide real-time markup over video.

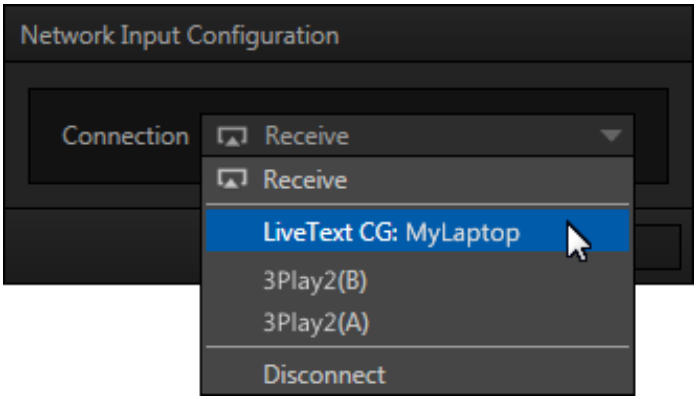


Figure 165

Click the gear next to the *Network Input* entry in the *DSK* source menu to access *Network Input Configuration* dialog (Figure 165). The *Connection* drop-down menu lists all qualified network sources that have been detected.

Note: Gigabit networking is highly recommended, and should be considered mandatory for HD sessions in particular. This can also be important for third-party network sources.

Let's consider some of the available network source types in a little more detail.

IVGA

iVGA is the proprietary NewTek utility supplied to let you use data directly from the interface of a networked computer. It has a tiny footprint, and can even be run from a USB thumb drive, without no need to install it directly on the hard drive of the remote client system.

iVGA client programs are supplied for both Microsoft Windows® and Apple OS X®. You will find iVGA installation files inside the C:\3Play\Extras\iVGA folder on your system drive. There are several versions of iVGA, and you should select the one best suited to your host system.

Readme files found in the same location will help you determine which one is appropriate. Documentation for each version is also provided.

LIVETEXT

As we noted earlier, a companion workstation on your 3Play network with LiveText standalone installed can serve as a dedicated CG and title solution for your live presentations. When connected, LiveText is listed in the *Connection* menu. For more information on installing and using LiveText, please refer to its manual.

Figure 166

3PLAY™& TRICASTER™

3Play's own network *Output A* and *Output B* are available as sources to other NewTek live production systems, appearing in the source selector menus for network inputs as "3Play(A)" and "3Play(B)," where "3Play" is the network name for the system.

This means that an a/v feed from another 3Play (or TriCaster) on the network can be utilized in a DSK channel without tying up one of the main video inputs.

THIRD-PARTY APPLICATIONS

AIRPLAY

AirPlay® is Apple's protocol for getting audio and video from 'here' to 'there' – specifically, from an AirPlay source (which may be an Apple® computer, or a mobile device such as iPad®, iPod®, or iPhone®) to a second device.

The local network is the means of transmission between units, and a wireless connection from the player to the network is perfectly acceptable. Typically, the target device for AirPlay might be a television display or set of speakers, but your 3Play can also be the signal's recipient. It basically works as follows:

- You select the AirPlay entry in the *Source* menu for the *Network Input*, just as you might select an iVGA or LiveText source.
- 3Play identifies itself as a network client for AirPlay apps/applications.

- You can then designate 3Play as the output device for content played on the device.
- AirPlay streams video from the device to the local network, and on to 3Play.

DEVELOPER NETWORK

The NewTek Developer Network comprises a large and ever-growing ecosystem of companies and products. Many world-class organizations have developed applications and systems with support for NewTek's live production systems.

In particular, there is a great variety of solutions for specific needs that take advantage of 3Play's network inputs (as well as the Macro and automation features). Refer to the webpage at www.newtek.com/solutions/newtek-developer-network.html for the latest details of solutions that can facilitate and expand your own particular workflow.

15.3 CONFIGURATION

Each *DSK* layer has its own settings, accessed in the *Network Input Configuration* panel. Click the gear gadget at right beside the *Source* menu for either *DSK* channel to open this panel.

DSK settings are organized into several groups from top to bottom as follows:

1. *Fade*
2. *Position*
3. *Edges*

The *Fade* control group allows you to enable or disable a crossfade transition effect that is optionally used to show or hide the *DSK* display. The nearby menu allows you to set the duration of the crossfade. Naturally, when the fade is disabled, the operation of displaying or hiding the DSK occurs as a cut.

Reminder: Display or hide DSK channels by clicking the buttons labeled DSK A and DSK B.

15.3.1 POSITION

Click and drag on the *Position* button to relocate the associated *DSK* layer vertically or horizontally within the frame.

Dragging left or right directly on either of the two nearby numeric controls adjusts the position on a single axis only.

Hint: You can also constrain mouse actions to one axis by holding down the Ctrl key before dragging. Dragging a numeric control with the Ctrl key pressed increases accuracy by 5 times.

Dragging the cursor on the *Scale* button (magnifying glass) affects the size of the overlay. Again, if you drag just one of the nearby numeric sliders you can adjust just one dimension of the corresponding *DSK* layer – width or height.

Hint: If you click a numeric field (or right-click it), you can type a value into the gadget using the keyboard – press Enter to complete the editing action, or Esc to cancel it).

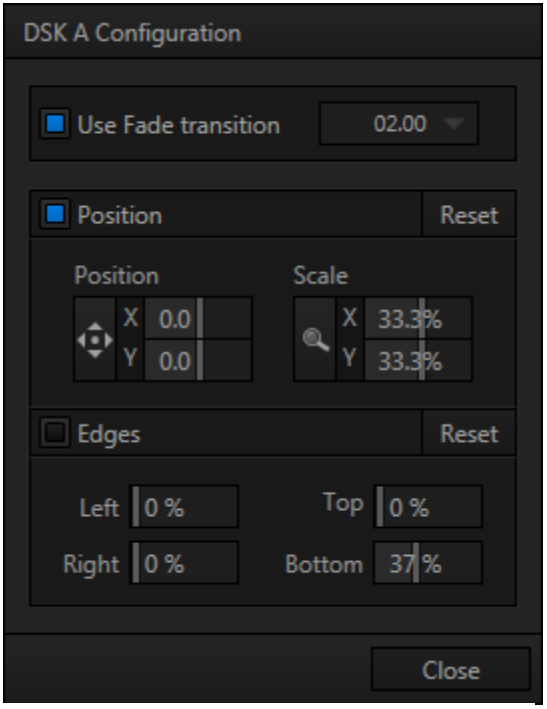


Figure 167

15.3.2 EDGES

Edge controls for *DSK* layers allow you to independently crop the sides of the DSK channels. Restore default settings to all parameters of the *Position* or *Edge* control groups by clicking *Reset*.

16 PUBLISH

3Play's *Publish* features allows the operator to selectively publish clips and still images to local or networked storage, or even directly upload to popular social media sites – on the fly. The process does not impose intrusive burdens on the operator, and can be performed even while the action and replay marking continue.

Networks, corporate users and others with sophisticated website and distribution needs can deliver all the action moments after it occurs, with all manner of meaningful benefits.

Quick and convenient distribution of media for post-production and archival purposes is a common need. Too, in today's multi-screen world, a single program feed is often supplemented in many and important ways. Consumers ingest media from multiple sources simultaneously.

Figure 168

A live online presence may even be the primary broadcast medium for some productions. For others, distribution of supplemental content on popular Internet channels including Facebook®, YouTube®, and Twitter®, provides opportunity for brand extension and additional monetization. 3Play's *Publish* feature brings all of the above into easy reach.

Tip: 3Play's Export Media module provides further tools and options for different batch export and transcoding workflows – see Section 5.3.1 for more detail.

16.1 OVERVIEW

Credentials for social media accounts and other upload targets are pre-configured in *Startup*, before production begins. A few choices regarding clip or still image sharing are set separately in the *Replay Desktop.* Afterward, it's quick and easy to distribute selected content to multiple sites, even as production and recording is ongoing.

16.2 ACCOUNT CONFIGURATION

You will see *Publish Account* icons in the titlebar of both the *Home* and *Session* pages of 3Play's Startup screen (Figure 168). Click an icon or the neighboring configure button (gear) to open the *Account Configuration* panel (Figure 169). This is where you enter your personal credentials for social media sites or storage targets, and specify local or networked destinations.

Hint: A green checkmark on its icon indicates an account is succesfully configured.

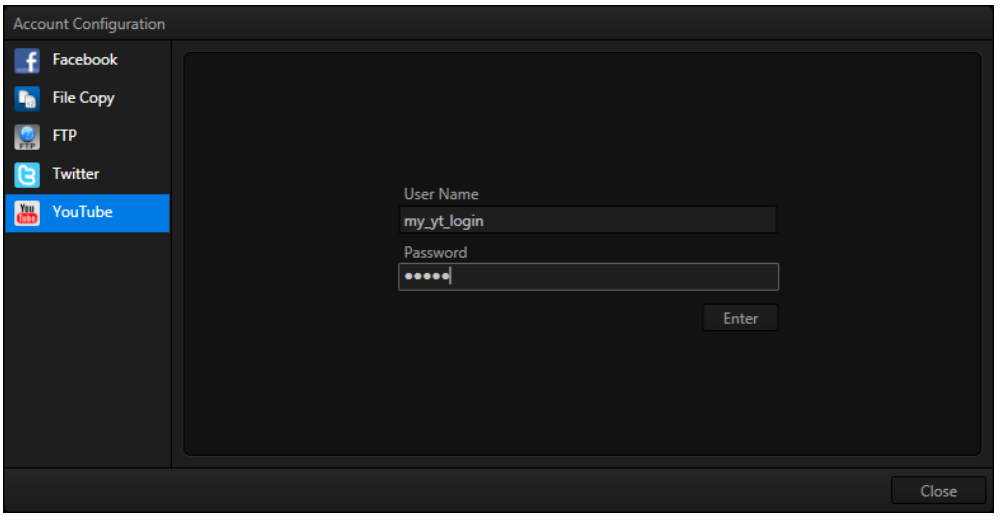


FIGURE 169

Click an entry in the *Account List* at left to display corresponding fields for your credentials in the pane at right. Typically you will need a *user name* and *password* for your social media accounts, as well as FTP servers. Connections are tested when you press *Enter*, and will report an error if a connection problem is detected.

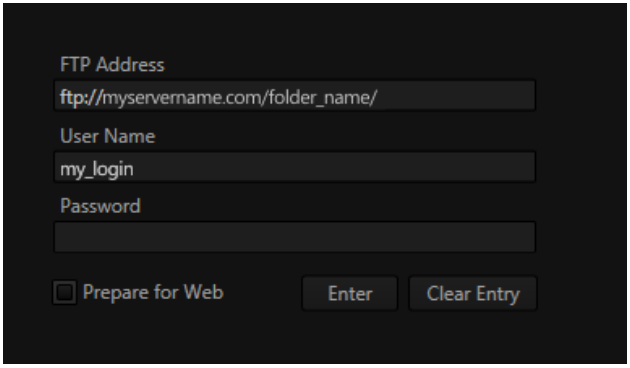
16.2.1 SOCIAL MEDIA SITES

At the time of writing, the *Publish* feature can send media to Facebook®, Twitter® and YouTube®. Other connections may be supported as it becomes possible to do so.

16.2.2 FILE COPY AND FTP

The *File Copy* and *FTP* options are very useful output alternatives, effectively providing a live distribution method that does not force you to wait until production ends to use them. These features can be invaluable for collaboration, whether local or remote.

16.2.3 COMPRESSION



A feature common to both *File Copy* and *FTP* publishing is the option to compress video before sharing.

Enabling the *Prepare for Web* option will encode files to a compact progressive scan H.264 (MP4) format suitable for the Internet. (Disable this option when you wish to use the files for post-production.)

Figure 170

16.2.4 WATERMARKING

To avoid misuse of private or copyrighted media, you may want to add a watermark before publishing it to public sites. The *Watermark* feature allows you to select a suitable custom image to overlay on your output.

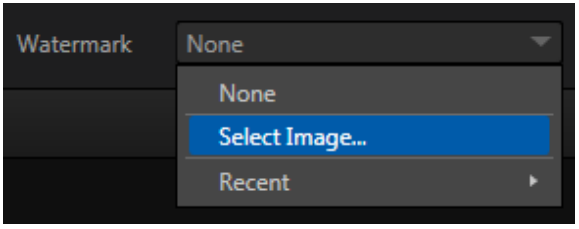


Figure 171

The image you select will be overlaid on shared video or still image files. It should be a 32 bit still image file (supported formats include PNG and Targa) that positions the watermark correctly in the frame taking into account the resolution and image aspect of exported files.

16.3 THE PUBLISH QUEUE

Having discussed configuration of destinations for sharing, let's move on to the settings and controls related to publishing (a.k.a., 'sharing') media that appear in the *Replay Desktop* during production.

16.3.1 SET PUBLISH DESTINATIONS

Configuring individual accounts (in *Startup*) ensures the output destinations for files you will publish are valid and available. Next, you want to indicate which of the accounts you intend to send files to during the current session.

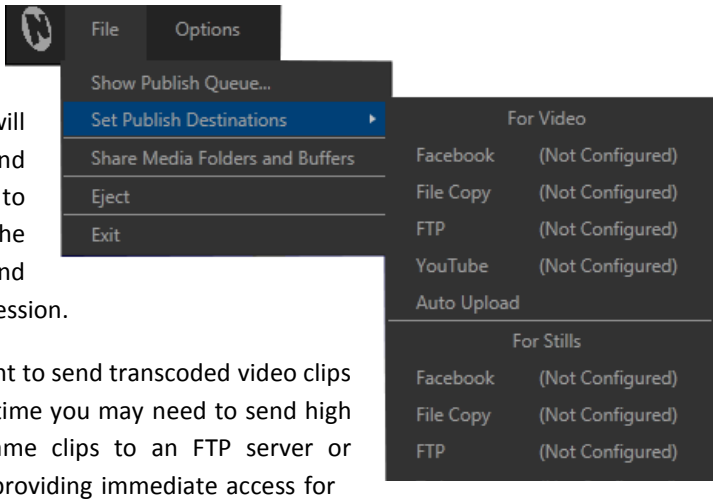


Figure 172

For example, you might want to send transcoded video clips to YouTube®; at the same time you may need to send high quality versions of the same clips to an FTP server or network storage location, providing immediate access for post-production purposes.

File menu items under the heading *Set Publish Destinations* let you pre-assign one or more *Publish* targets for both clips and stills.

AUTO UPLOAD

The bottom item in both *Set Publish Destination* groups (*Video* or *Stills*) is *Auto Upload*. When this switch is enabled, processing (including transcoding, when called for) of the items you add to the *Publish Queue* begins immediately. Otherwise (when *Auto Upload* is disabled), newly added items can be processed manually at a later time.

16.3.2 PUBLISHING CLIPS AND STILLS

Live replay production demands full attention. You know quite well that 'spare time' to take on added duties related to publishing media to social media sites is a figment of your boss's imagination. It would be different if all you had to do was punch a button on the *Control Surface*, right? *Riiiight?*

The fact is that – after spending the few minutes required to configure the accounts and media targets in advance, as described in Section16.2 and 16.3.1 above – it really is *that* easy (hint: don't tell your boss; just take the credit).

PUBLISHING CLIPS

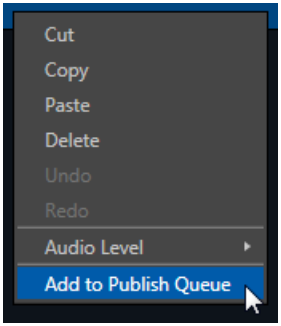


Figure 173

The last menu item in the clip context menu (opened by right-clicking in either the *CLIP LIST* or *PLAY LIST*) *is Add to Publish Queue*. This provides a convenient way to add entries to the *Publish Queue.*

PUBLISHING A GRAB

The *Grab* feature makes it even child's play to publish still images. You can grab every active live source and both outputs with just one click. When *Add to Publish Queue* is enabled in the *Grab Still Configuration* panel (see Section Grab), the grab from the currently delegated channel (A or B) is added to the *Queue* each time you grab a still.

Tip: If Auto Upload is enabled for Stills (Set Publish Destinations heading under the File menu), the transfer to configured publish accounts occurs immediately.

16.3.3 SHARE PUBLISH QUEUE

Select the *Share Publish Queue* item (in the *File* menu, *Replay Desktop DASHBOARD*) to open the *Publish Queue* panel (Figure 174). The *Publish Queue* panel is easy to comprehend. It shows a 'batch processing list' consisting of clips and still images you have added to the queue, using the clip context menu (*CLIPS LIST* and *PLAY LIST*) or automatically when grabbing stills, as discussed in the prior sub-heading.

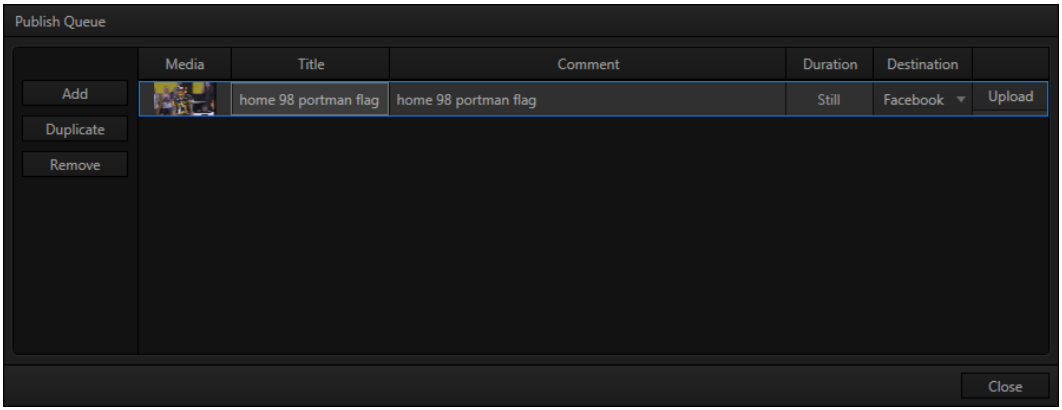


Figure 174

Tip: Remember that you can Add and even upload files while recording is underway.

All of the entries you add appear in the *queue pane* at right. Information about the clips and stills is displayed in columns, including the file name, *Duration*, and *Destination*. The values in these columns can be edited: click in the column to enable keyboard entry, or navigate to it and simply start typing. Press *Enter* or click elsewhere to end editing.

Title column entries affect social media uploads, but not *FTP* or *File Copy* operations. The *Comment* column likewise allows you to add remarks for uploads to social media sites.

The *Destination* column is home to a menu that allows you to modify the upload targets for the file. Note that you can even select destinations that have not yet been configured; this lets you queue up content, then later exit the *Live Desktop*, configure the account credentials, (see 16.2) and finally upload the content at a convenient time.

Click in the *Upload* column to actually publish the file (note that multi-selection is supported; all selected files are uploaded in this case). The neighboring *Status* column tracks upload progress.

QUEUE TOOLS

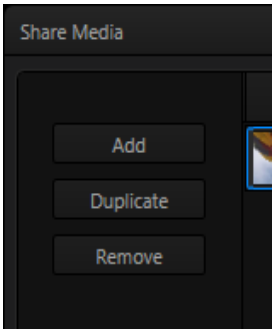


Figure 175

Three *Publish Queue* features help you manage your queue entries:

Add opens a *Media Browser*, which in turn lets you select something other than the default angle for *Grabs*, among other things.

Duplicate clones selected entries, allowing you to quickly and easily create versions of the entries that can then be assigned to different social media *Accounts* or target locations.

Remove, as you'd expect, deletes entries from the queue, doing so without any effect on the source files.

17 MACROS AND AUTOMATION

Macro capabilities smooth out your workflow, reducing complex operations to a single button press, and make it easy to produce sophisticated programs.

Macros provide many opportunities for both workflow streamlining and creative applications. (As well, macros can reduce or eliminate embarrassing operator errors.)

Keeping up with the action, having just the right angles on tap with little or no notice, preparing media for highlight reels and post production all calls for near superhuman performance from instant replay operators.

Macros can provide a great deal of help in this context. Record any sequence of events as a macro and play it back with one click. Alternatively, trigger it with a single keystroke or hardware control surface operation.

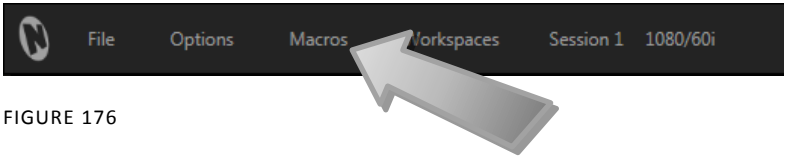


FIGURE 176

Macros can do almost anything; preload frequently used media, play clips, modify playback speed, automate complex operations or perform all of this synchronously. The compelling usefulness of macros justifies the prominent *Macros* menu placement in 3Play's *Dashboard*.

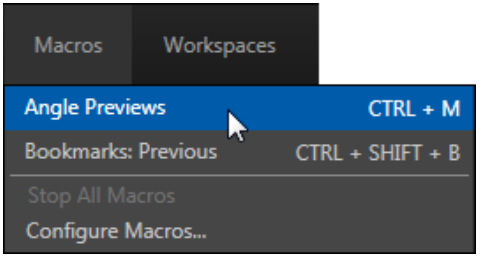


Figure 177

Click the *Macros* button to show a menu (Figure 177) containing a list of 'Favorite' macros, along with a *Configure Macros* item.

Select the latter item to open the *Macro Configuration Editor*, which is where you can create and manage macros.

17.1 SYSTEM MACROS

The largest part of the (resizable) *Macro Configuration Editor* consists of the *Macro List*. Initially, this list includes two items - a folder labeled *System Commands*, and another just beneath it named *Session Macros*.

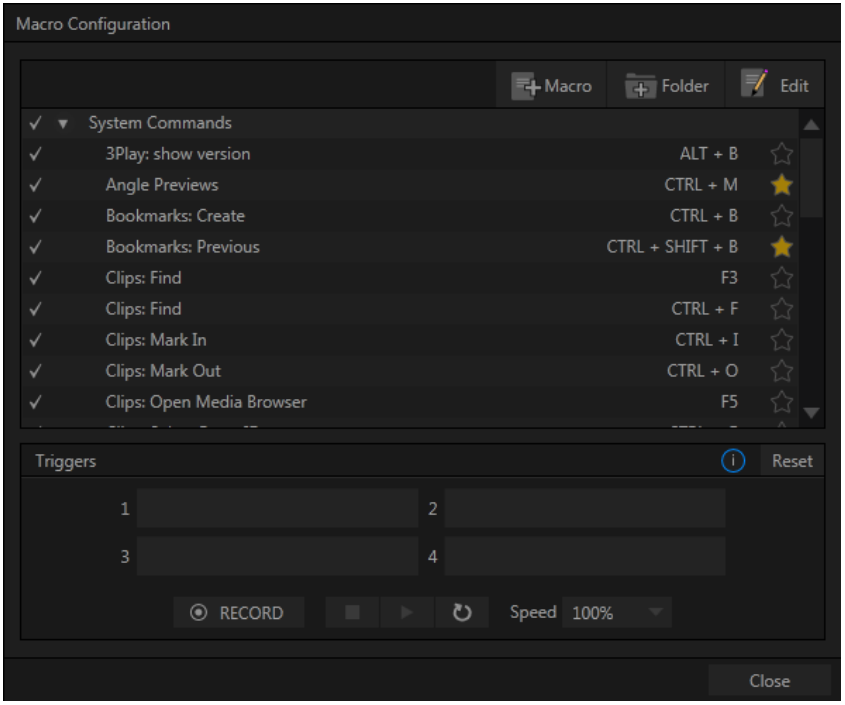


FIGURE 178

The System Commands folder includes commands identical to those actually called by the user interface and *Control Surface* to operate your 3Play – specifically those commands which have default shortcut keystrokes assigned to them. Expand this entry by clicking the triangle at left to see these items.

Hint: Notice that keystroke shortcuts for macro entries are shown at right. The small stars also appearing at right in Figure 178 identify items selected as 'favorites'. Starred items are listed in the main Macros menu (Figure 177) for quick access. Clicking a star toggles the status of the macro entry in a given row.

It's worth noting a few unique aspects of *System Commands*. First, *System Macros* are specially safeguarded within the system. *Rename, Delete*, *Clone* and *Paste* features are disabled, nor can you alter the order of entries in the list. Also, be aware that un-checking the *enable* switch at left for the entire *System Macros* folder (or individual entries within it) will naturally result in the failure of all related keystroke shortcuts. By design, this does not affect *Control Surface* operations, however.

17.2 SESSION MACROS

The second folder is initially empty. Any macro you place in this folder (by creating it there, cut and paste, or drag and drop operation), will be available in your current session only. Among other things, this provides a useful way to provide variants of your macros that are tailored to unique event types, or have different shortcuts for individual users.

17.3 RECORDING MACROS

Creating a new macro is simple. Buttons at upper right let you add folders and macros. Click the first to add a folder and name it. Click the *Add Macro* button to add a new macro entry.

Continue to define the macro by clicking the *Record* button at the bottom of the panel. Then just go ahead and perform the sequence of operations you wish to include in the macro. You can use mouse, keyboard, and *Control Surface* operations when doing so. When finished, click the *Stop* button to complete recording. Test the new macro by clicking the *Play* button.

17.3.1 MACRO PLAYBACK SPEED

You'll notice that an animated bar in the background of the macro's entry in the list tracks playback progress. You can modify the playback rate for your macro using the menu in the footer of the Macro Configuration panel. You can even set macros to loop using the button at right.

SNAPSHOT MODE

One option in the speed menu – *Snapshot* – bears further explanation. When you choose *Snapshot* as the macro's 'speed', you essentially force it jump to its end result. Any operation that is ultimately irrelevant in achieving that end is simply omitted. You will often *Snapshot* mode very useful for designing macros that configure 3Play to a particular state.

Hint: You can record a macro that includes other macros. Depending on your order of operations, you may need to re-highlight the newly recorded macro in the list to show its Stop control (to end macro recording).

17.3.2 MANAGING MACROS

The *Macro Configuration* panel has management features such as folders, rename, clone, and hotkey assignment, as well as *Import* and *Export* (share macros with other 3Play users).

THE CONTEXT MENU

Entries in the lister have a context menu, shown when you right-click an item. Macros can be recorded, as we've seen, of played, renamed, deleted, copied, cloned, or exported.

The *folder* context menu supports, in addition, *Play All*, *Stop All*, *Paste*, and *Import* operations. *Import* and *Export* are noteworthy features. These can be used to share macros with multiple users and systems, but provide another important opportunity.

A good deal of time can be spent preparing complex macros. It would be a shame for these to be lost through some mishap.

For this reason, we encourage you to use the *Export* feature to prepare a backup archive of your painstakingly designed macros. (This is quite easy to do, since *Export* of entire folders is supported, as is multi-selection.)

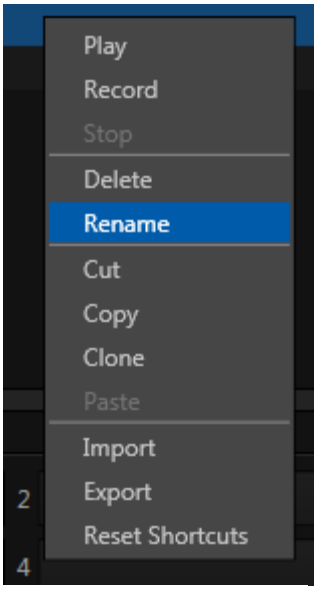


Figure 179

17.4 SHORTCUTS AND TRIGGERS

Macros may be executed by menu, keystroke shortcuts, MIDI controller or GPI trigger.

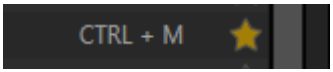


Figure 180

You can readily see the first shortcut assigned to a macro at right in its entry in the lister. (As mentioned earlier, you'll also see a 'star' gadget at right. Click this to add the macro to the *Favorites* menu, shown when you click directly on the *Macro* control in the *Dashboard*.)

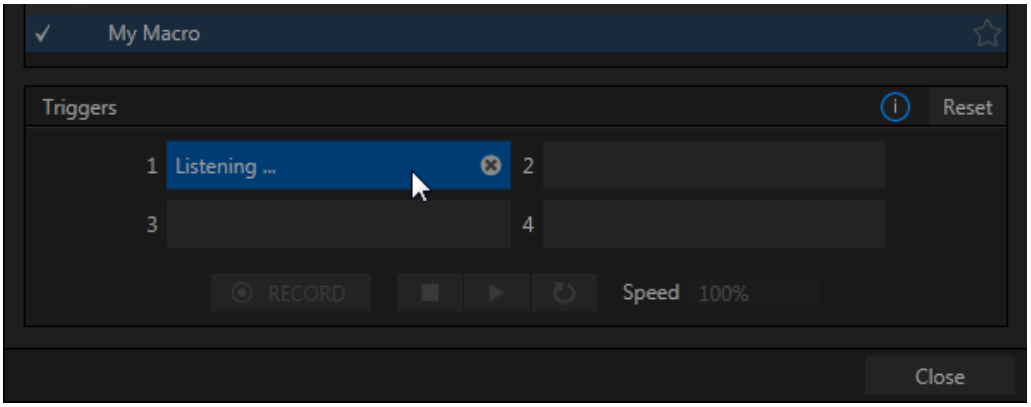


Figure 181

To set a new shortcut or modify an existing one, click one of the *Shortcut* fields in the footer of the *Macro Configuration Editor* panel; it will display a "Listening …" tag. Then press the desired keystroke (or control surface *Macro* button combination).

Hint: For clarity, lower-case characters are shown as capitals. True upper-case letters are displayed in the form [Shift + (character)].

Shortcuts are 'per user', allowing you to employ your personal favorites without conflicting with the shortcut preferences of other users. Speaking of conflicts, note that assigning a single shortcut combination to multiple macros *is* supported.

17.4.1 CONFLICTED SHORTCUTS

Figure 182

By the way, assigning identical shortcut combinations to multiple macros *is* supported, and deliberately so. Still, as you may wish to avoid conflicts, a yellow triangular gadget referred to as a 'bang' (or, if you are in a certain mood, a 'conflict nacho') is shown in this case.

Bangs appear at right for all macro entries in the *Macro Configuration* panel lister with shortcut conflicts.

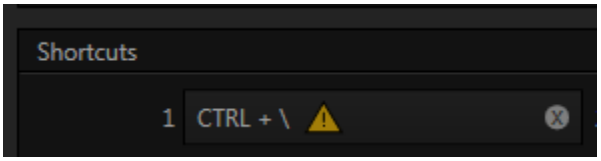


FIGURE 183

Of course, when multiple shortcuts are assigned, the first shortcut for a macro – i.e., the one displayed at right in the *Macro Configuration* panel lister – may not actually be the one that is conflicted; too, there might be several conflicts for a single macro.

In such a case, select the macro in the list to show the corresponding *Shortcuts group* entries at the bottom of the panel (FIGURE 183). Conflicted 'Listen' controls will *all* show bangs. Clicking a bang automatically jumps to the next conflicted entry, so you can advance quickly through them, resolving conflicts as you go.

(Obviously, you can resolve a conflict by assigning a different keystroke to conflicted macros. Or you can disable macros if you like, using the checkmark switch.)

Hint: Folder level checkmark switches offer a method for managing 'deliberate' shortcut conflicts. For example, the shortcuts assigned to entire folders of macros designed for various sessions or purposes can conflict with shortcuts in another folder., but keystrokes for any inactive folders are ignored.

DELIBERATE 'CONFLICTS'

Otherwise, pressing the conflicted shortcut key will perform *all* macros sharing that keystroke assignment. On the other hand, your 'conflicts' may be deliberate; running multiple macros with just one button press or gesture may be just what you had in mind.

17.5 MIDI CONTROLLERS

A useful (and often very affordable) macro trigger option is MIDI (Musical Instrument Digital Interface).

Figure 184

MIDI devices are often used in the audio and events industries, but can be found in other realms as well. Literally thousands of devices and systems of this sort are available.

MIDI Configuration Add-On:

The *Add-On* group in 3Play's *Session page* (Startup) includes a link named *Ableton Novation Launchpad*. This link opens a simple configuration application that allows you to alter the colors used to illuminate buttons on this popular MIDI device.

Simply choose a specific device from the menu at upper left, choose a *Fill Color*, and click a button on the screen with the fill bucket mouse pointer. (Alternatively, each button has a right-click menu you can use to select the color for that button.)

The *Macro Configuration* panel system can 'listen' for button presses from most MIDI controllers, just as it recognizes input from the keyboard or native control surface (see Section 17.3.2). Too, a wide variety of MIDI software and extensions are available for other devices, including mobile devices such as tablets and smart phones. These can be used to create unique custom control alternatives.

Note: Many MIDI devices provide 'plug-and-play' convenience. Some, though, require non-standard device drivers. Generally, adding device drivers to NewTek products is discouraged, since these may not have been prepared with the rigorous demands of live production in mind.

If you install a driver and encounter unintended consequences, you can resolve the problem by restoring to factory defaults and, if necessary, updating to the current software version appropriate for your system.

17.6 AIRSEND™ CONTROL

The software API (application programming interface) providing network A/V support in NewTek products is called AirSend™. Various systems and software (both native and third-party) also take advantage of AirSend to send and receive control instructions and tally (on air) notification.

AirSend supports more than just a/v data transfer. For example, AirSend also provides the ability to transmit commands between NewTek live production systems and other connected sources. This provides extremely powerful capabilities.

17.6.1 EXAMPLE – CONTROLLING 3PLAY

Let's consider a simple example taking advantage of the potential this ability offers.

Using TriCaster's Macro system, it is easy to take advantage of AirSend to send instructions from TriCaster to 3Play via the macro system. Such a macro could actually perform sequential operations on both systems, and be assigned to a shortcut keystroke or other macro trigger for convenient execution with a single user interaction.

When both 'parties' to the network 'conversation' have been prepared using the AirSend API, as in this case, there is no need for complicated configuration. TriCaster 'knows' which network source is connected to its network inputs, and automatically creates the necessary bi-directional communication channel.

For example, 3Play network outputs typically appear in TriCaster's *Network Input* source selectors as something like "3Play(A)" and "3Play(B)". If you select "3Play(A)" as the active source for TriCaster's *Net 1* input, a communication channel between 3Play's *A channel* and *Net 1* is automatically established. Unique shortcut entries in the macro identify which *Network Input* the instructions specified will be directed to. When examined in TriCaster's *Macro Editor*, a typical macro entry of this type might look as follows:

Delay (ms)	Shortcut	Value	Key 1	Value 1
0	net1	clip_play	speed	.5

The shortcut "net1" defines which *Network Input* will be addressed. Additional entries on the same line constitute an instruction that will be performed when the macro is executed.

- The Value “clip_play” commands the target source to play the currently selected clip (in our example, the current clip selected on 3Play’s channel A)

- The Key 1 entry “speed” sets the playback speed to the value which follows next on the line, “.5” in our example. This will cause playback to occur at 50% speed.

It is entirely possible to create more complex macros that combine AirSend commands of the sort just mentioned.

17.6.2 DEFAULT AIRSEND COMMANDS

As mentioned earlier, the macro shortcut entry “net1” addresses a controllable network source connected to the first network input on a NewTek live production system. TriCaster has a second network input, which you can send commands to using the shortcut entry “net2”.

The AirSend API also allows third-party developers to implement custom commands suited to their requirements. These, when provided, can be used in macros just like ‘NewTek native’ commands, even benefiting from the same automatic communication channel configuration. Documentation supplied with third-party products will provide information on custom commands that have been included.

By default, third-party products generally support the AirSend commands discussed next, included in the NewTek product macro system.

CLIP_STORE

Delay (ms)	Shortcut	Value	Key 1	Value 1
(ms)	*net1 or net2*	clip_store	index	*ID*

This command stores a custom local reference ID for the current clip (the one currently visible at on the network input). The value *ID* can be a string. ID is global and shared across your system (it is not stored per system output, if you have multiple).

For example:

Delay (ms)	Shortcut	Value	Key 1	Value 1
	net1	clip_store	index	AAA1

The entry above will 'remember' the current clip with the name "AAA1". (The default for ID is an empty string, which is a valid storage target.)

CLIP_RESTORE

Delay (ms)	Shortcut	Value	Key 1	Value 1
(ms)	*net1 or net2*	clip_restore	index	*ID*

This command cues up content previously stored with a specified ID value on the upstream source channel assigned to the network input designated.

For example:

Delay (ms)	Shortcut	Value	Key 1	Value 1
	net1	clip_restore	index	AAA1

The clip previously indexed as "AAA1" (using clip_store) is restored on the source system output channel connected to Net 1. The playhead is set to the beginning of the clip. (If the indexed clip is not located, nothing occurs.)

CLIP_ SELECT

Delay (ms)	Shortcut	Value	Key 1	Value 1
(ms)	*net1 or net2*	clip_select	index	*#*

Select a page (or clip) defined by the value assigned to index. This may be a number specifying a particular page or at times, another property.

For example, sending a "clip_select" command to 3Play with a suitable numeric value assigned as the "index" key selects a specific Play List tab by index (assuming Play List mode is active. On the other hand, in Clip List mode, if the value for "index" was "0-023" the clip referred to would be selected.

For example:

Delay (ms)	Shortcut	Value	Key 1	Value 1
	net1	clip_select	index	4

This would select the fourth Play List tab on the 3Play output (A or B) connected to Net 1.

CLIP_ MOVE

Delay (ms)	Shortcut	Value	Key 1	Value 1
(ms)	*net1 or net2*	clip_ move	distance	#

Move the specified number of pages forwards or backwards from the current page.

For example:

Delay (ms)	Shortcut	Value	Key 1	Value 1
	net1	clip_move	distance	-1

The entry above would select the previous clip on the source connected to Net 1.

CLIP_ PLAY

Delay (ms)	Shortcut	Value	Key 1	Value 1	Key 2	Value 2
(ms)	*net1 or net2*	clip_ play	speed	#	position	#

You can specify “speed”, “position” or both keys (the order of keys is not important).

When “position” is not specified, play begins at the current frame. The value for position is specified in seconds, while speed is expressed as a playback rate value (1.0 = 100%).

For example:

Delay	Shortcut	Value	Key 1	Value 1	Key 2	Value 2
	net1	clip_ play	speed	-.5	position	10

This entry would play a clip backwards at 50% speed from a position 10 seconds into the clip.

CLIP_ SCRUB

Delay (ms)	Shortcut	Value	Key 1	Value 1
(ms)	*net1 or net2*	clip_ scrub	distance	#

This command will move the playhead backward or forward by a distance of # seconds. For example:

Delay (ms)	Shortcut	Value	Key 1	Value 1
	net1	clip_scrub	distance	5

The entry above would advance the playhead five seconds further into a clip displayed on the source connected to *Net 1*.

NOTES: The software associates values with their key name, thus key can be entered in any order. The following are valid formats for numeric entries: "+0.1", "0.1", ".1", "-0.1".

17.7 AMP CONTROL

AMP stands for Advanced Media Protocol. The original implementation by Odetics Broadcast Corporation® provides a variety of commands, which over time have been applied and extended by other developers according to their requirements.

3Play responds to a number of AMP of commands received across a network connection from external devices.

17.7.1 CONFIGURING AMP

3Play's AMP support is not unlike its AirSend implementation, but AMP does not enjoy the same 'auto-magic' communication configuration advantages. Thus you will generally need to configure the external controller to communicate with 3Play by providing its IP address (which you can locate, for example, by exiting to Windows and using the system *Network and Sharing Center*). You will also need to configure the external control system to address one or both of 3Play's A and B output channels.

In all likelihood, the developer of your external system will have documented AMP configuration and usage, but the next section provides details of the 3Play implementation for your interest.

17.7.2 AMP SHORTCUTS

AMP commands sent to trigger native 3Play shortcut commands of the same sort used by the user interface and *Macro* system. These shortcuts consist of two parts: a *prefix* that identifies the target 3Play output channel (A or b); and a *suffix* constituting the command to be executed. The AMP instruction may also include values, such as unique clip identifiers, similar to 3Play's Clip IDs.

The supported *prefixes* are amp_vtr1 and amp_vtr2. These address 3Play's *Output A* or *B* respectively. Supported suffixes are listed in the following table:

Suffix	Value	Description
_loop	bool	Changes looping playback status for the playout channel. If no value is specified then looping is toggled.
_play	void	Play at 1X speed
_stop	void	Stops playback
_query	void	Query returns a result (string) identifying the content currently on output and stores it for a subsequent _cue
_cue	String	Populates a special playlist tab named EXT VTR with a clip or playlist previously identified by a query. (If the value is void, performs a ReCue operation.)
_eject	void	Clears the current EXT VTR content

17.8 GPI CONTROLLERS

GPI, or General Purpose Interface, is long serving analog control signal system based on simple contact closure. GPI inputs and outputs are very common on professional production equipment.

The macro system in NewTek live production devices can take advantage of intermediary devices, such as the eBOX™ network/GPI hardware interface from JLCooper Electronics, to support both GPI signal input and output.

17.8.1 CONFIGURATION

For an external GPI device to communicate with a NewTek live production system, it must be manually defined by text entries in the file named gpi_setup.xml. This file can be located in the directory at C:\3Play\Configuration\. The entry for a given GPI control device must contain an IP address and port, password, and custom name, entered as follows:

< *device* name="*name* " ip="*###.###.###.###*" port="*##*" password=" "/>

At the time of writing, the xml 'element name' signified above by the placeholder *device* should be "jlcooper", without the quotation marks. The value for the "name" attribute that follows is a custom name of your choosing.

Hint: Normally, connected GPI devices are identified by unique names in this file; otherwise (if GPI devices share a single name) GPI commands are issued to them simultaneously.

The remaining configuration attributes ("ip", "port" and "password") are set at the external hardware device (refer to the vendor's documentation for details); the corresponding values need only be transferred into the XML configuration file.

A typical entry might look like this:

```
<jlcooper name="JLCooper1" ip="192.168.128.102" port="23" password=""/>
```

17.8.2 LISTENING FOR GPI TRIGGERS

Configured and connected GPI interface devices can trigger macros just like a keyboard shortcut, control surface, or MIDI button operation can. To assign a GPI trigger to a macro, simply click a 'gesture field' in the *Shortcuts* group at the bottom of the *Macro Configuration* panel; then send the desired external GPI trigger to the system. The 'listening' control will recorded the GPI signal, and a suitable shortcut entry will be displayed (see Section 17.3.2).

17.8.3 SENDING GPI COMMANDS

A special macro command allows you to send GPI signals to external devices and systems via network-connected GPI interface devices (such as the eBOX™ from JLCooper Electronics). GPI macro entries are formatted as shown below:

Delay (ms)	Shortcut	Value	Key 1	Value 1	etc.
####	gpi	*name*	*GPI_pin#*	*boolean*	

- **Delay** – the interval, in milliseconds, between the time when the command on the prior line (if any) was issued to the system, and execution of this line.
- **Shortcut** – Use the entry "gpi" in this field to send a GPI signal.
- **Value** – The shortcut value is the name of the GPI device (defined earlier in gpi_setup.xml) that you want the signal defined on this line to address.

- **Key # (0 – *n*)** – The value you enter in this field identifies a target pin on the external DVI device to receive a signal defined in the following field. The entry should be formatted as "pin#" (e.g., "pin1", without quotation marks).

- **Value # (0 – *n*)** – This value controls the contact closure state (on or off) for the GPI device pin identified by the preceding key. The value can be entered variously as "1" or "0" **,** "on" or "off", "true" or "false" (without quotations).

A typical entry might look like the following:

Delay (ms)	Shortcut	Value	Key 1	Value 1	etc.
500	gpi	jlcooper	pin12	1	

Hint: Multiple GPI pins can be targetted simultaneously by key/value pairs entered on a single line.

Alternatively, some GPI devices require a GPI 'pulse' of a specified duration. In such a case, you might send an "on" command on one line, followed – after a suitable delay – by an "off" command sent to the same pin.

17.9 EDITING MACROS

Often you will wish to modify values assigned to the various steps in an existing macro, rather than re-recording it; or perhaps you want to experiment with other possibilities. Click the *Edit* button to open the *Macro Editor* for the currently selected macro.

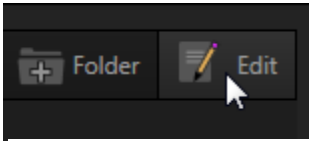


Figure 185

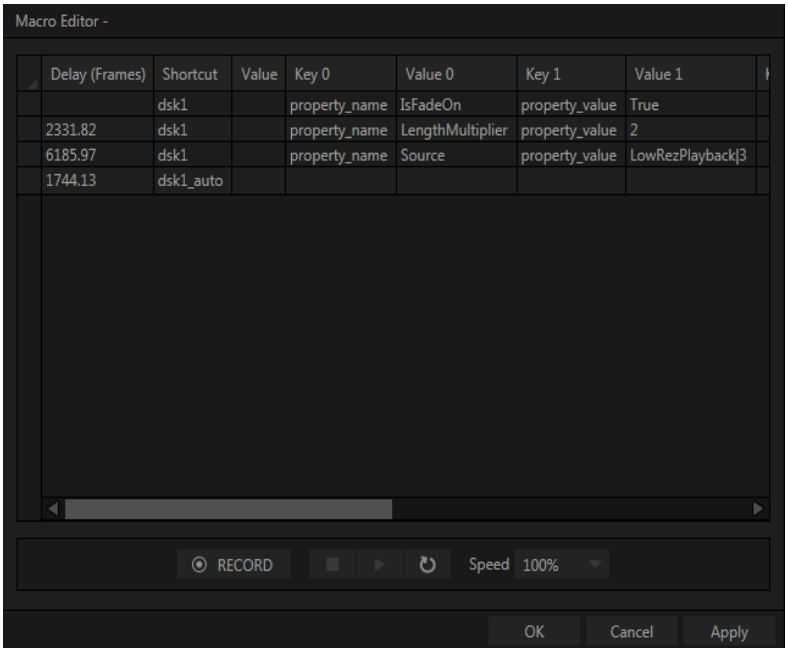


FIGURE 186

This deceptively simple editor presents the shortcut sequence your macro contains, along with all of its values in a simple to comprehend 'spreadsheet-style' interface. Right-clicking opens the editor's context menu (the keyboard shortcut Ctrl + i also inserts a row). Standard copy and paste keyboard shortcuts are supported as well. When done editing a macro, click *Apply* (or *Cancel*, to close the editor without saving your changes).

Hint: Use the Record button in the footer of the Editor to insert newly recorded entries into the current at the selected line.

PART III (APPENDICES)

A time-saving question and answer section, followed by an extensive listing of Shortcut Keys and keyword index …

APPENDIX A 3PLAY MINI VIRTUAL CONTROL SURFACE

3Play Mini's default external control system is a virtual surface that you can conveniently open in a web browser on any suitable device on the same network – including mobile devices like tablets.

This section describes the use and features of this control system. (3Play Mini does support hardware 3Play control surfaces, available separately.)

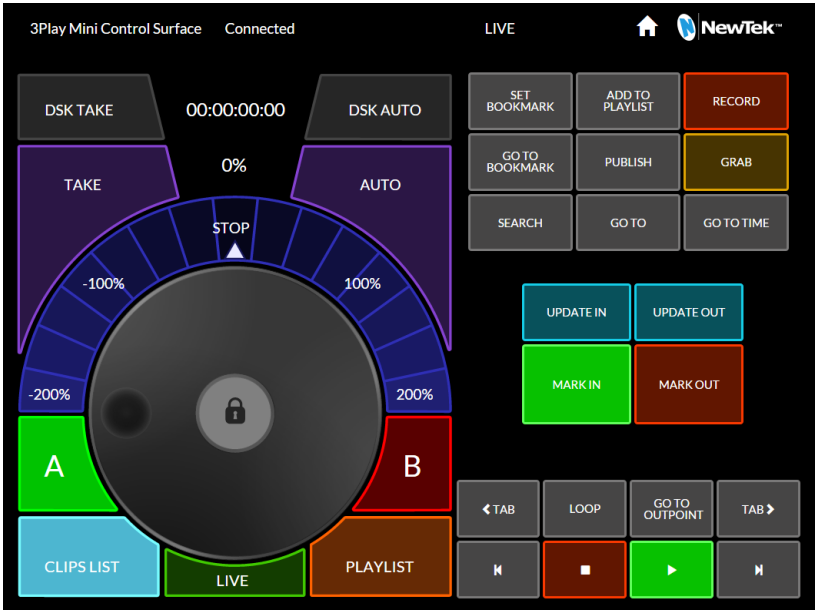


Figure 187

A.1 Accessing the Virtual Control Surface

When a 3Play session is started you will see a dialogue that provides a link. This link can be typed in the browser of another system or mobile device on the network to open the *Virtual Control Surface*.

Hint: You can also get the URL you need from the *Info* panel that is displayed when you click the (?) button found in the upper-right corner of the *Replay Desktop*.

A.2 Unique Virtual Control Surface Functions

The following functions are unique to the operation of the Virtual Control Surface:

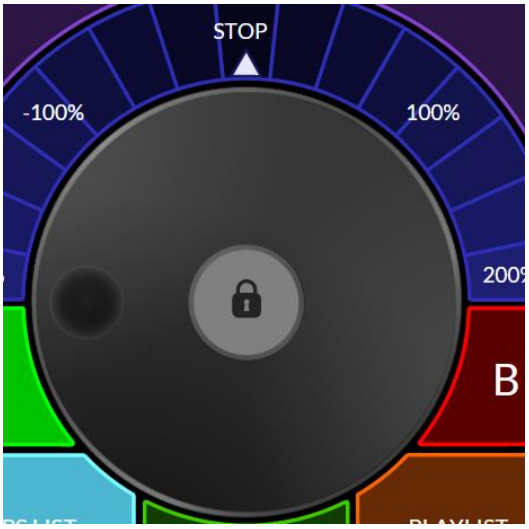


Figure 188

- The *Jog-wheel* features a padlock icon. When the lock is enabled you cannot jog past the modified IN or OUT points of a clip.

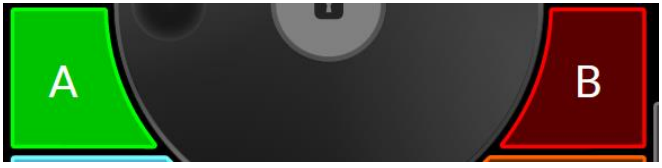


Figure 189

- *A|B channels* – The physical control surface allows you to set an active channel using the *Channel Delegate* buttons represented by *A, B*, and *LINK*. The *Virtual Control Surface* has a visible A and B button for this purpose as well. *LINK* mode can be achieved by dragging from A to B (or vice versa). To un-link, press the desired channel and swipe in any direction away from the other channel.

- *T-bar* **–** the arc just above the jog-wheel marked -200% to 200% serves as the 'T-bar' for the *Virtual Control Surface*, allowing you to press and drag to a desired value.

The 3Play Mini Virtual Control Surface core functionality is similar to that found in the physical control surface. As such, explanations on core usage and functionality can be found in Chapter 8.

A.3 The Resources Page

Figure 190

The *3Play Mini Resources Page* is home to a host of valuable links and documents. You can open this page by clicking on the *Home* icon found at the right end of the *Virtual Control Surface* toolbar.

A.4 Ad hoc networking

A wireless ad hoc network (also referred to as a computer-to-computer network) allows computers and other devices to connect directly to each other, removing the need for traditional networking equipment such as a server or a router. This can be useful in situations where a wireless network is not available to connect to the Virtual CS.

The following outlines how to setup an ad hoc wireless network.

All computers and devices that will be connecting to each other via the ad hoc network must have a wireless adapter.

1. Click the start button then type "Network and Sharing Center" in the Search box.
2. In the panel that opens click on "Set Up a Network Connection".
3. Choose "Set up a wireless ad hoc (computer-to-computer) network", then click Next.

4. The following page should have the heading “Give your network a name and choose security options”. Here is a breakdown on what you will find this page:
    a. Network name - whatever name you choose try to keep it simple and easy to remember.
    b. Security type – of the options available choose WPA2 Personal this more secure than WEP.
    c. Security key/Passphrase – basically a password. When coming up with a passphrase keep the following in mind:
        i. The passphrase should be 8 – 63 characters long.
        ii. Come up with something that contains numbers, upper and lowercase letters, and symbols. Try not to use words that could be found in the dictionary. Either make sure to set the field to display characters or remember the password.
    d. If this is a setup you will be using again you can use the “Save this network” checkbox. Otherwise this ad hoc setup will disappear once you are done using it.
5. The Next page will state that the ad hoc connection is ready to use. It will also show you the “Wireless network name” and security key or passphrase you came up with. All that is left is to click “Close” and then go to your other device and connect using this information.

APPENDIX B HOW DO I … ?

In this section, we'll consider the most common questions NewTek 3Play™ operators may have (and of course we'll provide the answer, too).

The answers are intentionally brief – perhaps just a reminder of one or two steps required to perform some operation. For this reason, we'll also point you to explanatory information elsewhere in this manual whenever that would be useful.

If you've largely mastered your NewTek 3Play™ system, but have a specific question, this may be the best place to look first. The headings that follow list related questions and answers together, along with cross-references and other helpful remarks.

Tip: The NewTek website includes a comprehensive FAQ database containing a wealth of useful information on all of its products – please see http://www.newtek.com/faq/

How do I ...

Connections *221*
Connect cameras? 221
Color correct mismatched cameras? 221
Connect monitors? 222
Improve the quality of Multiview output? 223
Connect the Genlock source? 223
Connect the 3Playcontrol surface 224
Supplement*: My system has suddenly stopped responding to the control surface.* What can I do? 224
Insert/Remove a Drive From a Removable Drive Bay 224
Supplement: What hard drives are recommended for NewTek 3Play? 225
Connect an external hard drive? 226
Eject a hard drive? 226
Connect to a network/the Internet? 226
Enable termination for video inputs? 226

Sessions *226*
Supplement: What is a 'session? 226
Delete a session (and its content)? 227
Rename a Session? 227
Manage selected content inside a session? 227

Events and Recording *227*
Start recording? 227
End recording? 228
Mark an Event? 228
play a Clip? 229
Prepare a Highlight Reel? 229
Select a different Play List clip for the same time period? 229

Files *230*
Manage files? 230
Import media files? 230
Prepare clips for the Play List using Apple® Final Cut Pro? 230
Add an external File Location to the Media Browser? 231
Remove a Location From the File Browser? 231
Export Files to an external drive? 232
Import/Export files larger than 4 Gigabytes? 232

Software, Maintenance and Updates *232*
Improve system performance? 232
Resolve serious instability or dropped frames? 233
Update NewTek 3Play software? 233
Install virus protection? 233
Install my favorite software (or codec)? 234
Restore 3Play software? 234

Registration and Tech Support *236*
Access Technical Support? 236
Find hardware/firmware revision numbers? 237

Miscellaneous *237*
Set up remote desktop control of 3Play? 237
Deal With Clips or images That Seem Blurry? 237

Access Windows 237
Return to the Startup Screen from the Widows™ Desktop 237

More Questions and Answers *238*
Why is my power supply beeping? 238
Supplement: Where can I obtain replacement or spare Power Supply modules? 238

B.1 CONNECTIONS

B.1.1 CONNECT CAMERAS?

1. Connect video sources to the appropriately labeled BNC input connectors on the NewTek 3Play *backplate*, according to your camera's connection type – see Section 3.4. You may find the BNC removal tool shipped with your system helpful.

2. Open a 3Play *session* (or create a new one) from the *3Play Startup Screen*, and launch the *Replay Desktop*.

3. Double-click the preview monitor on the *Replay Desktop* for the source you want to set up, or click the *Configure* (gear) button that appears below in its monitor label.

4. Choose an appropriate *Connection Type* for your camera in the *Input Settings* tab (see Sections 3.4 and 7.2.1).

B.1.2 COLOR CORRECT MISMATCHED CAMERAS?

Your 3Play system permits the use of sources that do not match the current session format. You might connect an SD camera during an HD session, for example. The official broadcast standard for SD video is Rec. 601, but HD video conforms to Rec. 709 – and NewTek 3Play output color space is governed by the session format.

When the natural color space for a connected source does not match the current output specification (in this example, Rec. 709), 3Play automatically attempts to compensate – but it's always best to refer to downstream scopes for critical accuracy.

1. As required, connect external Waveform and Vectorscope monitors to 3Play outputs
2. Your downstream scopes should be configured to conform to the broadcast color specification for your current session.
3. Calibrate your sources one by one using the *Proc Amp* tools for individual inputs (see Section 7.2.2.)

B.1.3 CONNECT MONITORS?

REPLAY DESKTOP MONITOR

With the power off, connect an external computer monitor to the port labeled *Interface* on 3Play's backplate. Use a suitable adapter if necessary for your monitor.

MULTIVIEW (SECONDARY) MONITOR

The secondary monitor output on the backplate is for the *Multiview* output feature.

4. Connect the external device to the *Multiview* output on the backplate using an appropriate cable (and/or adapter, if required) – see Section 3.5.4.
5. Launch a 3Play session (or create a new one) from the *Startup Screen*.
6. Double-click one of the output monitors to open the *Output Configuration* panel.
7. In the Aux/*Multiview* tab, set *Resolution* for *Multiview* to match the native resolution of the external device.
8. Select your preferred display from the *Layout* menu in the same group.

NOTE: Changing Output Resolution can cause frames to be dropped briefly. We do not recommend changing this setting during live production.

OUTPUT VIDEO MONITORS/DEVICES

Downstream video devices you wish to send 3Play output to must be compatible with the video broadcast standard (such as NTSC or PAL) and format (SD or HD) of the current 3Play *session*.

1. Connect cables between downstream devices (whether monitors or other devices) and appropriately labeled video output connectors on the backplate (see Section 3.5.1).

2. Open a 3Play *session* (or create a new one) from the 3Play *Startup Screen*.

3. For *SD* sessions and display devices, you may need to adjust the connection options found in *Output Configuration*:

    a. Double-click one of the output monitors to open the *Output Configuration* panel.

    a. Click the appropriate output tab (*A* or *B*), and select either '*Composite + Y/C*' or *Component*, according to the connection type used by your device. (Please see Section 3.7 for more information.)

B.1.4 IMPROVE THE QUALITY OF MULTIVIEW OUTPUT?

It is possible for to choose settings that will have a negative effect on the *Multiview* video output image. For best quality, be sure that the *VGA Output Resolution* you choose corresponds to that of the monitor connected.

NOTE: Changing Output Resolution can cause frames to be dropped briefly. Thus we do not recommend changing this setting during live production.

B.1.5 CONNECT THE GENLOCK REFERENCE SIGNAL?

1. Connect the reference signal to the *Genlock* input (BNC connector) on the backplate.
2. See Section 3.8 for details on configuring *Genlock* settings.

B.1.6 CONNECT THE 3PLAY CONTROL SURFACE?

Connect the USB cable from the Control Surface to one of your NewTek 3Play's USB ports. Do not extend the supplied cable if possible.

SUPPLEMENTARY QUESTION:

Q: *My system has suddenly stopped responding to the Control Surface. What can I do?*

A: The foremost reason this might happen is if the cable (or extender cable) you are using between the *Control Surface* and NewTek 3Play failed to deliver sufficient current consistently. In the short term (if you are in the middle of a show), you can generally resolve this issue by simply unplugging and re-plugging the Control Surface.

However, please note that the use of so-called "USB extenders" is not recommended. Whenever possible, use a single USB cable of the correct length. Each added connector on the signal path is a potential connection problem, and also causes signal 'reflections'. Such an arrangement may seem to work for a while, then fail unpredictably.

If you are using a very long USB cable (or a poor quality cable), you should supply a powered hub at the end of the cable nearest the Control Surface, then complete the connection with a short USB cable from the hub to the *Control Surface* (an unpowered hub will be of no help).

B.1.7 INSERT/REMOVE A DRIVE FROM A REMOVABLE DRIVE BAY

1. If the system is running, and if applicable – eject the hard drive you wish to remove (see Section B.1.9).
2. Drop the front panel on your NewTek 3Play down.
3. Open the removable drive bay door.
4. Pull the hard drive currently in the drive bay to remove it.
5. Insert the new hard drive ('connector end' first)

Figure 191 – 3P lay

6. Close the drive bay door.
7. Close the front panel.

SUPPLEMENTARY QUESTION:

Q: *What hard drives are recommended for removable drive bays?*

A: NewTek Sales may offer additional hard drives for use in the removable bays. NewTek supplied storage media has been carefully tested to meet exacting specifications, and can be expected to provide optimal performance and reliability.

Of course, you are free to purchase storage media from other sources. Keep in mind that manufacturer specifications and reviews may highlight favorable statistics, focusing on results from 'typical' (i.e., less demanding) operating environments. Naturally, NewTek cannot guarantee that hard drives obtained from such sources will provide performance adequate to meet operational requirements. Here are some guidelines to keep in mind if you employ hard drives purchased from other sources:

- All else being equal, larger drives are normally faster – try to use 1TB drives or above.
- Use SATA 3.0GB/s drives with rotational speed of 7200 R.P.M. (or better).
- Drives should have a larger onboard cache (32Mb or better is recommended).

B.1.8 CONNECT AN EXTERNAL HARD DRIVE?

Connect a suitable cable from the external hard drive to the eSATA port on the system's backplate. Note that in general, for use with large video files the hard drive should be formatted using the NTSF file system (the FAT file system chokes on exported files exceeding 4 Gigabytes, as will often be the case).

The eSATA port supports transfer speeds that are fast enough for live recording to suitable external media. USB ports should not be used for recording, but may be useful for transferring files to and from the system (it is always best to import media for use in live sessions).

B.1.9 EJECT A HARD DRIVE?

Click the *Eject* item in the *Home page* titlebar in 3Play's *Startup* screen, or the *File* menu of the Replay Desktop, and select the hard drive you wish to safely disconnect.

B.1.10 CONNECT TO A NETWORK?

Please refer to Section 3.11.

B.1.11 ENABLE TERMINATION FOR VIDEO INPUTS?

NewTek 3Play provides full-time video termination. If you need to loop through (or t-off from) upstream video devices (such as an external monitor) in your video pipeline, you should ensure termination is turned OFF for earlier devices.

B.2 SESSIONS

SUPPLEMENTARY QUESTION:

Q: *What is a session?*

A: Sessions can be thought of as 'top-level presets'. They store all of the settings, playlists, device configurations, and so on for a given live production. See Section 5.1.

B.2.1 DELETE A SESSION (AND ITS CONTENT)?

1. Right-click the name of the session in the *Home* page of the *Startup screen*.

2. Select *Delete* from the menu.

This will delete the session, and any content that is local to the session (external data that has not been imported and data on drives that are not mounted at the time will not be deleted). See Section 5.2.2 for more information.

B.2.2 RENAME A SESSION

1. If necessary, close the *Replay Desktop* by choosing *Exit* in the *File* menu.

2. Return to the *Home page*.

3. Right-click the name of the session you want to rename in the list shown at right to open the context menu.

4. Choose *Rename* from the menu that appears.

B.2.3 MANAGE SELECTED CONTENT INSIDE A SESSION?

1. Click the name of the session containing the content you wish to manage in the *Home* page of the *Startup Screen*.

2. Under *Browse* at (right on the *Session* page), click the link for the type of content you wish to manage (see Section 5.3.1).

B.3 EVENTS AND RECORDING

B.3.1 START RECORDING?

1. Press the *REC* button on the *Control Surface*.
   or …

2. Press *IN or OUT* on the *Control Surface.*
   or …
3. Press the *Record* button in the *Dashboard* at the top of the *Replay Desktop.*

B.3.2 END RECORDING?

1. Press *SHIFT + REC* on the *Control Surface*.
   or …
2. Press the *Record* button in the *Dashboard* at the top of the *Replay Desktop* a second time.

B.3.3 MARK AN EVENT?

There are two principle methods for marking events:

ONE-BUTTON METHOD

1. Watch the input monitors, and press the *OUT* button on the *Control Surface* whenever a notable event occurs (see Section 8.10).

2. This creates a new event in the *CLIP LIST*, setting an *Out Point* at the current timecode, and an *In Point* as required to fulfill the default duration set in the *Options* menu (see Section 6.4.2). Of course, you can trim the event afterward any time you wish.

TWO-BUTTON METHOD

1. Press the *IN* button on the Control Surface at any convenient time. This creates a new 'incomplete' event in the *CLIP LIST*.

2. (Optional) If nothing noteworthy occurs in the next while, feel free to press *IN* again from time to time, updating the In Point of the event.

3. Press *OUT* to complete the event when something interesting occurs (see Section 8.10).

B.3.4 PLAY A CLIP?

1. In the *CLIP LIST*, double-click the *Memo* field for the input (clip) you want to play

   or …

2. Navigate to a clip using the *Control Surface* or keyboard and press *PLAY*.
3. Or, simply move the *T-Bar* forward (from 0%).

RELATED QUESTIONS:

Q: I pressed PLAY, so why is my output frozen?

A: Check to see if the *Control Surface T-Bar* is at the 0% position (stopped).

B.3.5 PREPARE A HIGHLIGHT REEL?

1. Select clips for events you want to include in the *CLIP LIST* and press ADD *TO PLAY LIST* to add them to a page in the *PLAY LIST* module.

2. Drag clip entries up or down in the *PLAY LIST* table as necessary to place them in the order you want them to play.

3. Optionally, re-trim the clips, to taste.

4. Adjust level controls for embedded audio in the *Audio* columns (see Section 12.3.4), *Transition Rate* (Section 12.3.7) and *Speed* (12.3.6) for individual or multi-selected clips.

5. (Optional) Enable the *Music Track* switch in the *PLAY LIST* titlebar and load a music file using the nearby menu (see Section 12.1.4). Adjust its level by clicking the *Music Configuration* button (gear) at right.

B.3.6 SELECT A DIFFERENT PLAY LIST CLIP FOR THE SAME TIME PERIOD?

1. Hold down the *ANGLE* button on the *Control Surface*.

2. Press a number on the *Control Surface* number pad, or use the left/right *TAB* buttons to access the available clips for the current time segment.

B.4 FILES

B.4.1 MANAGE FILES?

Please refer to the item (How do I) Manage Selected Content inside a Session? (Section B.2.3).

B.4.2 IMPORT MEDIA FILES?

Importing files implies copying them into the session folders, making them *local* (rather than *external*) to the system and session. To import media files:

1. Open (or create) a 3Play session.

2. Click the *Import Media* button (below the *Browse > Sound and Music* link at right).

3. Click *Add*, and use the system file explorer that opens to select the file(s) you wish to import into the current session; then click the *Open* button.

Selected files are automatically copied to the appropriate folder (Clips, Stills, etc.) according to their file type (see Section 5.2.6, Import Media).

Tip: External files can be used in a session without being imported, by adding them to CLIP LIST using the Add Media button and Media Browser – see Section 11.1.5. However, it should be noted that the transfer speed of most external devices is too slow for reliable playback of media content, making it wise to use the Import feature instead whenever possible.

B.4.3 PREPARE CLIPS FOR THE PLAY LIST USING APPLE® FINAL CUT PRO?

We are often asked what format to use for export from Final Cut for best compatibility in 3Play, especially for HD clips. Really, in most cases you can simply take advantage of 3Play's Import module – see Section 5.3.1.

Alternatively, you might install NewTek's free Quicktime™ codecs (available on the 'Product Updates and Downloads' page on the NewTek website), with a view to rendering to one of these directly on your FCP system.

Actually, FCP does not natively provide broad Quicktime export options, but Compressor™ does; and FCP can use the latter as its encoder. After creating a Compressor preset that uses one of the NewTek SpeedHQ codecs, you can simply click on Final Cut's *File* menu, choose *Send To > Compressor* (Compressor will open automatically), and proceed as usual. See the documentation for you Apple® products for more detail.

B.4.4 ADD AN EXTERNAL FILE LOCATION TO THE MEDIA BROWSER?

1. *Open* a 3Play session.
2. Click the *Add Media* button in the *CLIP LIST* titlebar.
3. Click the *Add Media Location* button at bottom left in the *Media Browser*.
4. Select the folder you wish to list as a custom location, and click *OK*.
5. (Optional) Enable the Transcode switches for each item added to ensure smooth playback.

(See Custom Locations in Section 11.1.5)

B.4.5 REMOVE A LOCATION FROM THE FILE BROWSER?

1. Click the *Add Media* button in the *CLIP LIST* or *PLAY LIST* pane.
2. Right-click the name of the location you wish to remove from the list, and select *Remove* in the menu that opens.

(See the sub-heading Context Menus in Section 11.1.5)

B.4.6 EXPORT FILES TO AN EXTERNAL DRIVE?

There are several approaches to exporting media files from within 3Play sessions. By far the simplest is to use the *Publish* feature – see the Chapter 15, and in particular, Section 16.2.2.

B.4.7 IMPORT/EXPORT FILES LARGER THAN 4 GIGABYTES?

This question may arise if you are using external media, perhaps portable hard drives or USB 'thumb' drives. These are commonly prepared using the FAT32 file system, which does not support files larger than 4GB. As video files will often exceed this size, FAT32 is not very suitable for use in that context.

You should reformat these drives using the NTFS system to eliminate this limitation (or you might consider transferring larger files over a network connection).

B.4.8 AVOID THE ERROR "… COPY THIS FILE WITHOUT ITS PROPERTIES?"

Windows shows this error message when you export a media file to an external volume that does not use the NTFS file system. The warning is not really a concern (although we highly recommend using NTFS formatted storage, as noted in Section B.4.7). The files will copy just fine regardless.

NewTek 3Play generates metadata attributes for media files for internal use. This metadata is only retained when you export to storage formatted as NTFS. That being said, the metadata is automatically regenerated if you use the files with NewTek 3Play again later, so its loss poses no issue.

B.5 SOFTWARE, MAINTENANCE AND UPDATES

B.5.1 IMPROVE PERFORMANCE?

1. Click the *Utilities* icon on the *Home page* in *Startup*.

2. Click the *Defragment Hard Drive* link at right (see Section 5.2.4), and follow further directions provided. This process can take considerable time, so it's best not to commence unless time (before a production) permits.

B.5.2 RESOLVE SERIOUS INSTABILITY OR DROPPED FRAMES?

If the system should ever become seriously unstable or drop frames (after the warm-up period), consider a full 3Play *Restore* operation – see item B.5.6.

B.5.3 UPDATE NEWTEK 3PLAY SOFTWARE?

1. Connect 3Play to a valid Internet connection.

2. Click the *Utilities* icon on the Home page in *Startup*.

3. Click *Update 3Play*, and follow directions provided (see Section 5.2.4).

B.5.4 INSTALL VIRUS PROTECTION?

Virus and malware protection applications can dramatically impact system performance (this is true even for Windows Defender™, which is deliberately disabled for this reason). In general, once additional software or services are enabled on the system, real-time performance cannot be guaranteed. In a perfect world, we'd love to recommend that you do not install virus and/or malware protection software on NewTek 3Play.

Certainly you should *always* take sensible precautions to avoid introducing infected files by rigorously virus-checking media you plan to connect or import before ever connecting it to 3Play. Realistically though, in some settings you may feel the need for protection outweighs the risk.

If you really feel you *must* install virus protection, switch all of its 'active scanning' operations off so that nothing can occur in the background during live production. Anything that provides full-time protection will dramatically reduce memory and disk speed on your system, so you should disable those features. Then, only when you need to do so (perhaps on a daily or weekly schedule), perform a manual scan.

Never let scanning continue into a live switching event, and do not assume that you can now omit pre-checking files and external media for nasty surprises.

Tip: In the unfortunate event that malware ever does evade defensive measures you employ, you can always use the Restore function to completely rehabilitate your system.

B.5.5 INSTALL MY FAVORITE SOFTWARE (OR CODEC)?

NewTek 3Play is not a 'general purpose' computer. The installed software suite is finely tuned to provide reliable performance and amazing features. Anything you install apart from official updates places these important goals at risk. Doing so is strongly discouraged.

Regarding codecs, NewTek 3Play supports many popular image, audio, and video formats for playback. That said, hardly a day passes without another new one appearing on the scene. If a file you would like to use does not play back well (or at all), consider converting it to a friendlier format. The *Import Media* module makes this very easy to do.

If you feel the format is so popular that it should be supported, please submit the details as a feature request.

B.5.6 RESTORE THE SYSTEM TO ORIGINAL 'AS-SHIPPED' CONDITION?

We firmly expect you will never need it, but isn't it good to know that comprehensive software *Restore* features are available in the event of an unforeseen problem? You can use one of two methods to access *Restore*, depending on your situation.

To restore your system software *after the system launches normally*:

1. Click the *Utilities* icon on the *Home Page* of the *Startup Screen*.
2. Select the link labeled *Backup or Restore System*.
3. The system will restart. When it does, select the *Restore Factory Defaults bootup option*.

If 3Play should ever fail to boot up properly, you may need to try a different approach to restore your system software, as follows:

1. Select the menu item labeled *Restore Factory Defaults* from the black boot screen that appears shortly after powering up. (If this screen does not automatically appear, reboot and press F8 a few times in quick succession, say once per second, immediately after powering up.)

Either method described above will ultimately present you with powerful system backup and restore tools. The management screen initially presents you with 3 options as follows:

- *Restore System Partition to Factory Defaults*: overwrites the C partition (only) on the existing system drive from the disk image in its local Restore partition.

  Note: Following a Reset to Factory Defaults operation, the Windows® system software must be re-activated. To do this, you will need the operating system serial number, which you will find on a sticker affixed to the exterior of your system.

  This procedure restores your system drive ("C:") to its 'as-shipped' state. However any software updates you performed earlier will be overwritten. When you do restore, remember to update the 3Play software afterward.

- *Create User Backup Drive*: create a bootable clone of the entire system drive (as it exists at the time) on either an external HDD or a drive mounted in a removable hard drive bay.

  The clone operation includes:
  - The existing (factory-prepared) Restore partition
  - The complete C partition

  In cases of catastrophic drive failure requiring drive replacement, a service technician can connect the *User Backup* 'clone' drive in place of the original internal system drive and you'll be back in production (prudence would call for creating a new *User Backup* drive as the first order of business.

- *Restore System Partition from User Backup Drive*: overwrites the C partition (only) on the existing system drive with the C partition on the external user backup drive. This allows you to insert a *User Backup* drive into a removable drive bay (or otherwise connect it), and regain a functional system partition as stored on the clone drive.

Note: This feature it is intended to allow a restore operation of the system drive that the clone was prepared on. It is not intended to allow restoration from a 'foreign' unit. Using the 'Restore System Partition from User Backup Drive' in the latter manner will almost certainly cause multiple problems.

In a dire emergency, however (such as if a system drive fails when no User Backup from the same unit has been prepared) a User Backup created on a similar model 3Play can be helpful, as follows:

- Install the 'foreign' User Backup drive to replace the defunct system drive.

- Power up, and – at the boot selection screen – select 'Backup and Restore'.

- Choose 'Restore System Partition to Factory Defaults', and follow prompts.

It may be necessary to re-activate Windows, then re-enter the registration unlock code, and possibly update the 3Play software after the restoration process in this case. Be aware that the approach above is not encouraged, since minor hardware differences between the two units involved may well result in issues in the resulting Windows installation. As well, the new system drive will no longer have a factory restore partition. Still, it might be better than nothing in a crisis.

B.6 Registration And Tech Support

B.6.1 REGISTER THE NEWTEK 3PLAY SYSTEM?

Please refer to Section 3.3, Registration.

B.6.2 CONTACT TECHNICAL SUPPORT?

Visit the NewTek Website, at www.newtek.com and select *Support* from the main menu at the top of the page. This page always contains the latest support information for your NewTek products, including *FAQs* and documentation. It also lists the Customer Support Department's hours of operation and contact details.

B.6.3 FIND HARDWARE/FIRMWARE REVISION NUMBERS?

Click the *Help* icon and select *About 3Play* in *Startup*. Doing this opens an information panel that lists significant version numbers (at the bottom).

B.7 MISCELLANEOUS

B.7.1 SET UP REMOTE DESKTOP CONTROL OF 3PLAY?

Attempts to run screen sharing or remote desktop software on 3PLAY are strongly discouraged (this includes NewTek's own iVGA client). Applications of this type require *significant* system resources. At the same time, 3PLAY's *primary* functions require unhindered CPU and GPU access. Adding the resource demands of additional software of this type would almost certainly cause 3PLAY to drop frames on output, and should simply never be done.

B.7.2 DEAL WITH CLIPS OR IMAGES THAT SEEM BLURRY?

When paused or stopped, the system performs motion removal (to avoid unwanted flicker). This can make the image seem slightly blurred when paused, but it should look perfect during playback.

B.7.3 ACCESS WINDOWS™?

1. If necessary, close the *Replay Desktop* by clicking the [x] button at the right-hand end of the titlebar.

2. Click the *Shutdown* icon on the icon ring in *Startup*.

3. Click the *Exit to Windows* link at right (and confirm the warning dialog).

B.7.4 RETURN TO THE STARTUP SCREEN FROM THE WINDOWS™ DESKTOP

Double-click the *3Play* icon on the Windows™ desktop to return to 3Play's *Startup* screen.

B.8 More Questions and Answers

B.8.1 WHY IS MY POWER SUPPLY BEEPING?

NewTek 3Play 3PXD820 has redundant, replaceable power supply units. When you i) disconnect or ii) power down just one of the modules, or iii), if a PSU should fail, a beep is sounded to alert you. If you wish, you can mute the alert by pressing the green button on the back of the unit.

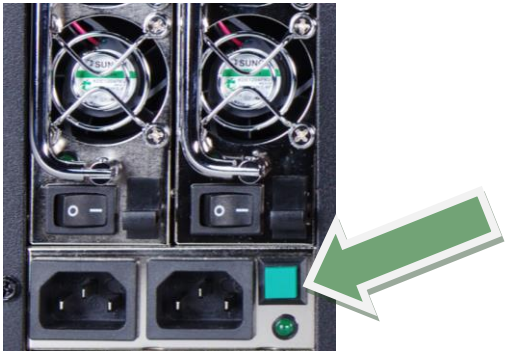


Figure 192

SUPPLEMENTARY QUESTION:

Q: *Where can I obtain replacement or spare Power Supply modules?*

A: Contact NewTek Sales for purchase information for spare components.

B.8.2 WHY ARE MY CLIP DURATION AND COUNTDOWN TIMES DIFFERENT?

At times, the duration shown for a clip in the CLIP LIST may not perfectly match the HUDs countdown timecode. This *Duration* value is based on the original clip framerate. However the *HUD* countdown timecode is based on the project framerate.

APPENDIX C KEYSTROKE SHORTCUTS

C.1 TABLES AND NAVIGATION

Toggle CLIP LIST Angle Previews (Redundant sessions only)	Ctrl + m
Previous row	Up arrow
Next row	Down arrow
Previous cell	Left arrow
Next cell	Right arrow
One page up	Page Up
One page down	Page Down
First cell in row	Home
Last cell in row	End
First cell in table	Ctrl + Home
Last cell in table	Ctrl + End

C.2 EDIT LISTS/TEXT

Cut	Ctrl + x
Copy	Ctrl + c
Paste	Ctrl + v
Remove event/item	Del
Append to current Memo value	Enter
Confirm edit	Enter
Copy Memo text to all angles of an event	Shift + Enter
Exit text edit without saving changes	Esc
Add Media (to CLIP LIST)	F5

C.3 MARKING

Mark In	Alt + i
Mark Out	Alt + o
Reset In Point	Alt + Shift + i
Reset Out Point	Alt + Shift + o
Bookmark (set)	Ctrl + b
Bookmark (jump to previous)	Ctrl + Shift + b

C.4 SEARCHING

Execute Search	F3 (or Ctrl + f)
Go To (Clip #)	Ctrl + g
Go To (timecode)	Ctrl + Shift + g

C.5 CONTROL

Delegate Channel A (Control)	Ctrl + [
Delegate Channel B (Control)	Ctrl +]
Link Channels (toggle)	Ctrl + =
Source Delegate – LIVE	Ctrl + l (lower case L)
Select input or angle	Alt + Numpad (1-8)
Previous input or angle	Alt + (left arrow)
Next input or angle	Alt + (right arrow)
Go to first frame of clip	Alt + Home
Go to last frame of clip	Alt + End

APPENDIX D RELIABILITY TESTING

We know our products play vital roles in the productions of our customers. Durability and consistent, robust performance are much more than just adjectives for your business and ours.

For this reason, all NewTek products undergo rigorous reliability testing to ensure they meet our exacting test standards. For NewTek 3Play, the following standards are applicable:

Test Parameter	Evaluation Standard
Temperature	Mil-Std-810F Part 2, Sections 501 & 502
Ambient Operating	0°C and +40°C
Ambient Non-Operating	-10°C and +55°C
Humidity	Mil-STD 810, IEC 60068-2-38
Ambient Operating	20% to 90%
Ambient Non-Operating	20% to 95%
Vibration	ASTM D3580-95; Mil-STD 810
Sinusoidal	Exceeds ASTM D3580-95 Paragraph 10.4: *3 Hz to 500 Hz*
Random	Mil-Std 810F Part 2.2.2, 60 minutes each axis, Section 514.5 C-VII
Electrostatic Discharge	IEC 61000-4-2
Air Discharge	8K Volts
Contact	4K Volts

3

3Play
Register, 23, 236

A

Activate Windows. *See* Windows™
Apple AirPlay®, 186
Apple® Final Cut Pro, 230
Asset Management (third party), 139
Audio
CLIP LIST menu, 147
Configure, 100
Connections, 30
LTC Connection, 105
Music, 150
PLAY LIST, 56, 153, 154
VU meters, 127
Audio 1, 2 & Audio 3, 4. *See PLAY LIST*
Auto. *See Transitions*
Aux Output (Audio), 30
Aux Output (Video), 29

B

Beep, 238
Bookmark, 15, 121
Buffers, 183

C

Channel Delegate, 89, 109, 110, 111, 114
Channel Info, 10, 91, 111, 129
Clip
Trim, 155
CLIP LIST, 6, 7, 15, 45, 137
Add to Playlist, 56, 122, 148, 229
Banks and pages, 150, 162
Cut, Copy, Paste, 147
Media Browser, 140
Add Media Location, 141, 231
Filter, 142
Menus, 143
Memo, 49, 50, 146
Navigation, 47
Play indicator, 148
Re-order, 147
Selection, 147
Table, 144
Titlebar, 137, 149
Transport, 147
Trimming, 145
Codecs, 234
Connect the Genlock source, 223
Connections
Cameras, 25, 96, 221
Control Surface, 224
External Drive, 226
Genlock, 27
LTC Timecode, 28
Output, 28, 222, 223
Control Surface, 6, 224
Add to Playlist, 122, 148, 229
Fast Jog, 117
IN, 119
Jog wheel, 117
Navigation, 115
One-button marking, 120, 228
OUT, 120
Transport, 116
Two-button marking, 228

D

Delayed playback. *See Playback mode:Delayed*
Developer Network, 187
Downstream Key. *See DSK*
DSK, 5, 14, 126, 179, 181, 187

E

EDL, 158
Eject, 65, 226
EULA. *See 3Play: Register*
Event, 6, 144
  Cut, Copy, Paste, 147
  Marking. *See Control Surface*
  Re-order, 55, 147
  Trim, 55, 145, 154, 229
Export Media. *See Startup Screen*

F

FAQ, 219
Fast Jog. *See Control Surface*
Files
  Export, 75, 232
  Import, 73, 230
Final Cut Pro, 230

G

Genlock
  Configure. *See I/O Configuration*
  Connect. *See Connections*
GPI
  Configuring devices, 209
  Receive, 210
  Send, 210

H

Hard Drive
  Defrag. *See* Startup Screen: Utilities
  Eject, 226
Hard drive (external), 226
Highlight Reel, 153, 229
Home Page. *See Startup Screen*

I

I/O Configuration
  A/V Passthrough, 95
  Audio, 39
    Clipping, 101
  Failsafe, 95
  Genlock, 92, 95
  Proc Amp, 14, 62, 102
  Video Input, 37, 96
    Connection Type, 96
  Video Output, 35, 89
IMAG, 30
Input Connectors, 25
Installing Third-Party Software, 234

J

Jog. *See Control Surface*

K

Keyboard, 21

L

Link, 114
Live Desktop
  Workspace Presets, 86
Live playback. *See Source Delegate:Live*
LiveText, 186

Loop, 116
LTC. *See Connections*

M

Macros, 197
  Conflicts, 201
  Conflicts, deliberate, 202
  Macro Configuration pane, 202
  Resolving conflicts, 202
  Sending GPI commands, 210
  Triggering
    GPI, 209, 210
Marking. *See Control Surface*
Memo. *See CLIP LIST*, *See CLIP LIST*
Monitors
  Clip List previews, 16, 85
  Dual Displays, 82
  Interface, 21, 222
  Output (external), 223
  Replay Desktop, 13
Music. *See PLAY LIST*

N

Navigation. *See Control Surface and CLIP LIST*
Network, 12, 22, 40, 78
Network Input, 184, 186
  AirPlay, 186
  iVGA, 185
Network Output, 31
Network Sharing, 183
NTSC. *See Video Standard*

O

Open Session. *See Startup Screen*
Overlay. *See DSK*

P

PAL. See Video Standard
PLAY LIST, 56, 149
  Audio, 154
  Loop, 116
  Memo, 154
  Music, 150, 152
  Play Indicator, 154
  Render, 57, 157
  Selection, 153
  Speed, 57, 155
  Table, 152
  Trimming, 154, 155
Playback mode
  Delayed, 5
Power conditioning, 22
Power Supply, 238
Proc Amp. *See I/O Configuration*
Production Time, 105
Publish, 19, 56, 84, 87, 122, 157, 189, 190, 192, 194

R

Record, 6, 7, 15, 44, 45, 65, 131
Register. *See 3Play: Register*
Rename Input, 82
Render. *See PLAY LIST*
Replay Desktop, 9, 34, 79
  Dual Displays, 82
Restart. *See* Startup Screen:Shutdown System
Restore 3Play, 72, 234

S

Sessions, 31, 62, 64, 67, 226
  Session Volume, 68
Share Media, 189
Shutdown. *See* Startup Screen:Shutdown

Social Media, 19, 56, 84, 87, 122, 157, 189, 190, 192, 194
Software
  Installing Third-Party, 234
Source Delegate, 44, 47, 112, 113, 128, 138, 150, 162
  Clip, 5
  List, 5
  Live, 5
Startup Screen, 8, 31, 61
  Export Media, 75
  Home Page, 8, 31, 63
  Open Session, 68, 227
  Session Page, 32, 34, 72
  Shutdown, 69
    Exit to Windows, 69
  System Utilities
    Restore 3Play, 234
  Utilities
    Defragment, 71, 233
    Update 3Play, 233
Storage (external), 226
Support, 236

T

T-Bar, 117
Technical Support, 236
Timecode, 28, 100, 107, 119, 133, 142, 144, 145, 153
  Configure, 105
Transitions, 5, 10, 17, 72, 111, 123, 156, 173, 174, 175, 177

U

UPS, 22

V

Video Standard, 27, 67
Virus Checker, 233
VU Meters, 101, 127

W

Watch Folders, 183
Windows™
  Activate, 22
  Exit to. *See Startup Screen:Shutdown* , *See Startup Screen:Shutdown*

CREDITS

Acknowledgments: Tim Jenison, Jim Plant

Engineering: Andrew Cross, Alvaro Suarez, Brian Brice, Cary Tetrick, Charles Steinkuehler, Dan Fletcher, Gil Triana, Greg Heine, Jagannadh Malla, James Killian, Jan Uribe, Jarrod Davis, Jeremy Brosius, Jeremy Wiseman, John Perkins, Karen Zipper, Kevin Rouviere, Kirk Morger, Liviu Corsatea, Mahdi Mohajer, Masaaki Konno, Menghua Wang, Michael Joiner, Michael Watkins, Mike Murphy, Nathan Kovner, Naveen Jayakumar, Ryan Hansberger, Shawn Wisniewski, Steve Bowie, Todd Bryant, Troy Stevenson

Additional thanks to:

- NewTek Marketing and Sales
- NewTek Customer Support
- NewTek Business Development

Thanks also to: John Powell, Curtis Varju

This product uses the following libraries, licensed under the LGPL license (see link below). For the source, and the ability to change and recompile these components, please visit the links provided:

- FreeImage library http://freeimage.sourceforge.net/
- LAME library http://lame.sourceforge.net/
- FFMPEG library http://ffmpeg.org/

For a copy of the LGPL licence, please look in the folder c:\3Play\LGPL\

Portions use Microsoft Windows Media Technologies. Copyright (c)1999-2008 Microsoft Corporation. All Rights reserved.

This product uses Inno Setup. Copyright (C) 1997-2010 Jordan Russell. All rights reserved. Portions Copyright (C) 2000-2010 Martijn Laan. All rights reserved. Inno Setup is provided subject to its license, which can be found at: http://www.jrsoftware.org/files/is/license.txt. Inno Setup is distributed WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY of FITNESS FOR A PARTICULAR PURPOSE.

All other software with the 3Play not expressly noted as free is proprietary and subject to NewTek's copyright rights or those of its licensors.

Trademarks: NewTek, TriCaster, TriCaster XD, TriCaster 8000, TriCaster TCXD8000, TCXD8000, TriCaster 860, TriCaster TCXD860, TCXD860, TriCaster 460, TriCaster TCXD460, TCXD460, TriCaster 410, TriCaster TCXD410, TCXD410, TriCaster Mini, TriCaster 40, TriCaster TCXD40, TCXD40, TriCaster 855, TriCaster TCXD855, TCXD855, TriCaster 455, TriCaster TCXD455, TCXD455, TriCaster EXTREME, TriCaster 850 EXTREME, TriCaster TCXD850 EXTREME, TCXD850 EXTREME, TriCaster 450 EXTREME, TriCaster TCXD450 EXTREME, TCXD450 EXTREME, TriCaster 850, TriCaster TCXD850, TCXD850, TriCaster 450, TriCaster TCXD450, TCXD450, TriCaster 300, TriCaster TCXD300, TCXD300, TriCaster PRO, TriCaster STUDIO, TriCaster BROADCAST, TriCaster DUO, 3PLAY, 3Play, 3Play 4800, 3PXD4800, 3Play 440, 3PXD440, 3Play Mini, 3Play 820, 3PXD820, 3Play 425, 3PXD425 3Play 330, 3PXD330, TalkShow, TalkShow VS100, ProTek, ProTek Care, ProTek Elite, iVGA, SpeedEDIT, IsoCorder, LiveText, DataLink, LiveSet, TriCaster Virtual Set Editor, TriCaster VSE, LiveMatte, TimeWarp, VT, VT[3], VT[4], V[T5], Video Toaster, Toaster, Inspire 3D, 3D Arsenal, Aura, LightWave, LightWave 3D and LightWave CORE are trademarks, service marks, and registered trademarks of NewTek. All other brand names, product names, or trademarks belong to their respective holders.

(c) NewTek 1990-2015, All Rights Reserved

3Play is a trademark of NewTek, Inc.
Copyright © 2015 NewTek. In. All rights reserved.